AFMC Supply Chain Metrics Guide

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Foreword – Mr. Edward C. Koenig III

Effective supply chain management relies upon our ability to transform a seemingly limitless amount of data into meaningful and useful measurements to guide sustainment operations. Ultimately, metrics that directly correlate to customer expectations and requirements will optimize Air Force supply chain performance within available resources. Through the introduction of this AFMC Supply Chain Metrics Guide, AFMC has taken the first step towards providing analysis tools which drive performance directly focused on supply chain customers.

This first iteration of the AFMC Supply Chain Metrics Guide identifies metrics most relevant to Air Force and AFMC organizational goals in serving the warfighter. By choosing key AFMC metrics that correlate most closely with Air Force specified standards for ***Aircraft Availability***, we link our performance and processes to the most significant input of the requirements process. Success in improving those metrics positively affects the most significant output of the supply chain, combat capability. This approach will help ensure that AFMC achieves the ultimate supply goal of getting the right part, to the right place, at the right time, at the right price.

//Signed//

EDWARD C. KOENIG III
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Section A - Overview

Purpose:

The purpose of this guide is to provide an official AFMC supply chain metrics reference. This guide illustrates the metric linkage to AFMC supply processes and identifies business rules, targets, algorithms, reporting standards, evaluation methods and follow-on analysis recommendations. *Measurement Packages* provide a list of the most applicable supply metrics by function in the supply chain. The AFMC metrics help deliver the proper process-linked and customer-focused analysis needed to manage supply activities and ensure AFMC is getting "…the right part, to the right place, at the right time, at the right price."

***Measurement Package*:** A group of five (plus or minus two) metrics best suited to measure supply system performance based on a unique perspective within the supply chain. (ALC Package, AFMC Package, Item Manager Package, etc.)

Process Linkage:

In order to be relevant, it is imperative that metrics link to core business processes. The following section outlines how AFMC measures supply performance and how that performance specifically links to the warfighter. Aircraft Availability drives a cycle that provides a mathematical and analytical link between process, performance and customer.

Figure 1: Aircraft Availability Metric Cycle

Air Staff - Aircraft Availability

Figure 1 (The Aircraft Availability Metric Cycle) illustrates how Aircraft Availability (AA) drives the overall process as the strategic input and final output of the AF supply system. From an AFMC supply perspective, Aircraft Availability is not only the best measure of support to the warfighter (see Figure 2: Aircraft Availability vs. Total Air Force), it is also the key input to the requirements process.

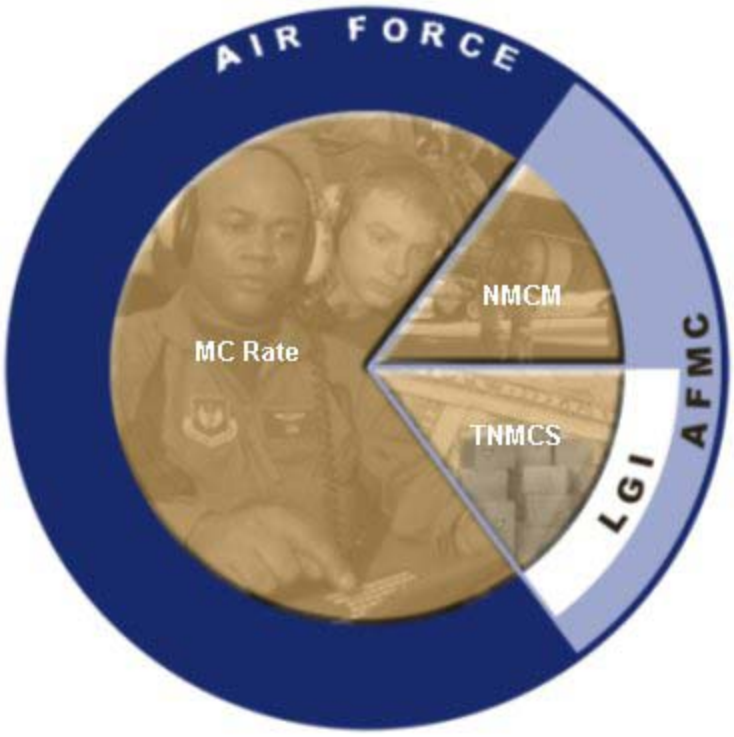

Figure 2: Aircraft Availability (Supply Focus) vs. Total Air Force (Warfighter Focus)

D200 - Requirements Computation

Although it is the key input, Aircraft Availability Targets (AATs) are not the only inputs to the requirements computation system (D200). The Air Staff provides estimated flying hours by weapon system. System Program Directors (SPDs) input Depot Level Managed Program data. Historical demands, pipeline times, and item manager adjustments are also inputs to D200. The requirements system converts these inputs into a requirement.

Asset Allocation / Financial Process

The financial process determines if the required buys and repairs needed to support the computed requirement can be sustained. If full funding is not available, new AATs are derived that can be financially supported.

Expected Backorder: A RBL Forecasted Retail, Air Force MICAP, Awaiting Part, Delayed Discrepancy or Due out to Maintenance backorder.

Once a financially supportable requirement is calculated, the Readiness Based Leveling (RBL) system (D035E) develops an allocation plan. Levels are distributed by Stock Record Account Number (SRAN) and National Item Inventory Number (NIIN) to minimize *Expected Backorders* (EBO). The RBL process runs quarterly.

Real World

Real world supply performance can be mapped back to the requirements process by comparing *Actual Due Outs* (ADO) to the RBL forecasted EBOs.

There are many factors that act to obscure this comparison. For example, field maintenance and base supply strive to maximize Aircraft Availability through *cannibalizations*, *non-project-coded Kit Issues*, and *lateral support.* These activities are outside the assumptions made during the requirements process. They mask potential ADOs, but can be measured to provide a more exact process analysis. In addition, the flying hours projected by the Air Staff may vary from actual flying hours. Lastly, parts required to repair larger components may not always be available from the Defense Logistics Agency (DLA) when needed, creating unforecasted pipeline delays.

By measuring the variance between EBOs and ADOs (in addition to those activities masking ADOs), the internal requirements process can be measured and managed.

Actual Due Out: An actual Retail, Air Force MICAP, Awaiting Part, Delayed Discrepancy or Due Out to Maintenance backorder (this does not include stock/kit replenishment).

Cannibalization: The removal of a functional part from one weapon system to fill a demand on another.

Non-Project Coded Kit Issue: Units sometimes use readiness spares packages as an extension of the warehouse to fill demands (which can jeopardize readiness).

Lateral Support: Instead of receiving a part from the source of supply, a unit may source the needed part from another base.

Finally, EBOs can be utilized to develop targets for metrics that demonstrate a correlation to Aircraft Availability. This allows for customer-focused analysis and management of the weapon system targets established by Air Staff.

Metrics – Performance vs. Process:

AFMC Supply defines a metric as a measurement of some aspect of the operation of an organization that can be stated in quantitative terms. Metrics must be defined with a reference point, should be stated in meaningful terms and should be consistent with how the organization delivers value to its customers.

At a recent AFMC Strategic Planning Conference, MAJCOM customers summarized their needs with three simple words - “Tails, Tails, Tails”. By linking supply-chain metrics to Aircraft Availability AFMC is aligning itself with operational needs.

AFMC Supply metrics are divided into two different categories:

Performance Measure – Data that indicates the strengths and opportunities for improvement in an organization. These measures can highlight organizational effectiveness, customer satisfaction, and the cost-effective use of resources and facilities. Performance measures are reported externally and show the most direct link to organizational goals and customer value.

Process Indicator – Data that provides information about or contributes to the understanding of a process. Process indicators are used in root cause analysis of deviations in performance measures. Typically, process indicators are not directly related to overall organizational goals and are used for internal reporting.

The linkage of AFMC supply metrics to customer expectations and core business strengths is essential to effectively evaluate and analyze supply process functions and delivery. Beginning and ending with Aircraft Availability, the various functional levels can adequately measure successes and address potential constraints, while retaining focus on the ultimate delivery to the warfighter.

Section B - Metrics

The following table outlines the supply metrics that are covered in detail in this section.

Metric:	Description:	Type:
Aircraft Availability (AA)	Percentage of the time an aircraft is not unavailable due to supply - expressed as 1 minus the Total Non Mission Capable Supply (TNMCS) time	Performance
MICAP Hours	Measurement of the hours accrued in a given month for items affecting mission capability that are on backorder	Performance
Customer Wait Time (CWT)	A pipeline measurement of customer due-outs (not including stock replenishment and kit fills) expressed in days measuring the average time between issuance of a warfighter order and receipt	Performance
Net Operating Result (NOR)	Financial measurement showing the difference between revenue and expenses or a bottom line profit and loss indicator	Performance
Total Requirements Variance (TRV)	Evaluation of Expected Backorders (RBL forecasted customer due-outs) vs. actual due outs (with option to view masked due-outs caused by laterals and non-project coded kit issues)	Process
MICAP Incidents	Measurement of the number of incidents based on the number of MICAP requisitions accumulated	Process
Backorders (BO)	Measures the number of demands placed on the supply system that can not be immediately satisfied from existing inventory (including stock replenishment)	Process
Issue Effectiveness (IE)	Measure of supply accounts ability to satisfy any customer demand (issue item off-the-shelf vs. backordering item)	Process
Stockage Effectiveness (SE)	Measure of supply accounts ability to satisfy customer demand for authorized stockage items	Process
Logistics Response Time (LRT)	A pipeline measurement of warfighter and base/depot retail requisitions expressed in days measuring the average time between issuance of a warfighter/base/depot retail order and receipt at base/depot supply	Process

Performance Measures

Aircraft Availability (AA)

OPR: AF/IL

OCR: AFMC/LGI

Description: Percentage of the time an aircraft is *not unavailable* due to supply. Expressed as 1 minus the Total Non Mission Capable Supply (TNMCS) rate, where TNMCS rate is defined as the percentage of time a weapon system cannot fly any of its assigned missions because of conditions attributed to supply or both supply and maintenance.

Calculation Formula:

AA = 1 - TNMCS

Data Source: The data source for Aircraft Availability is REMIS reported through the MERLIN website (**https://www.merlin.drc.com/Menu/LogOn.asp**).

Business Rules:

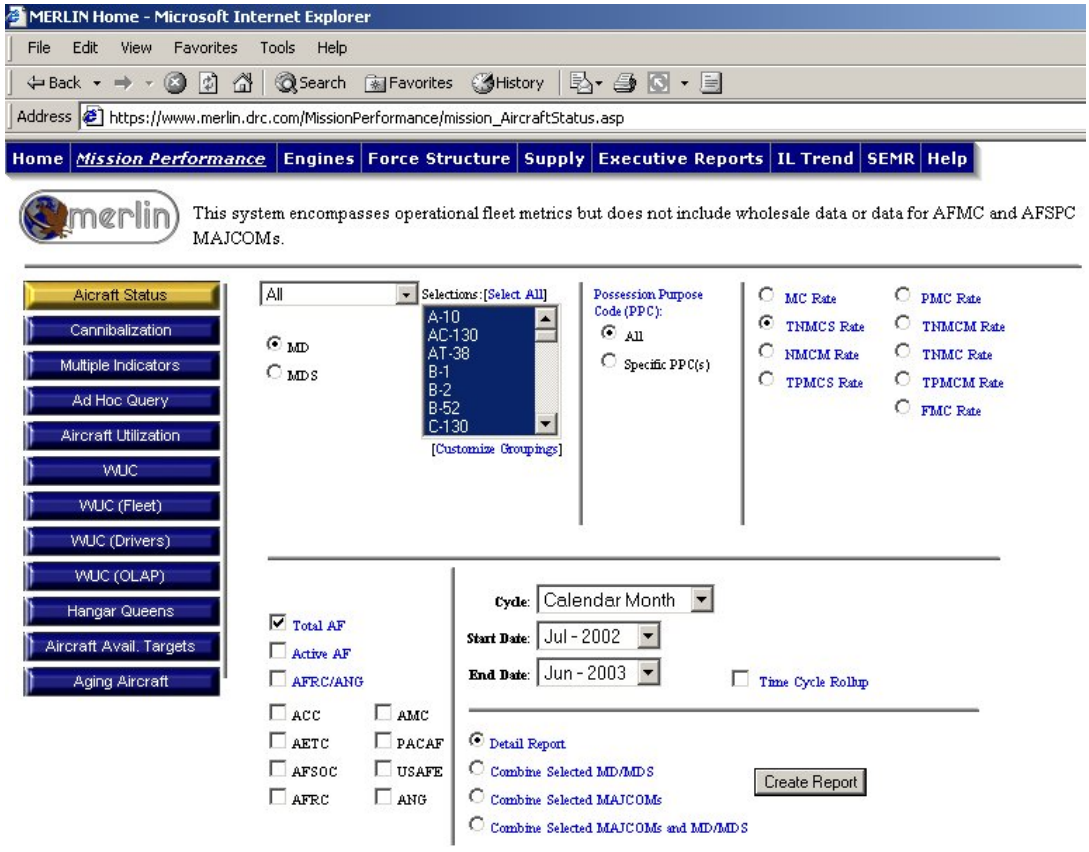

Figure 3: MERLIN Aircraft Availability Report Settings

Reference Figure 3 for the proper report attributes:

- Select MD to aggregate results by Mission Design
- Select Total Air Force to aggregate results at AF level
- Select 'All' for Possession Purpose code (PPC)
- Select Calendar Month for cycle and enter appropriate Start and End dates

Performance Targets:

MD	FYO4 Targets
A010	97%
B001	95%
B052	90%
C005	92%
KC010	97%
C017	93%
C130	91%
C141	97%
E003	95%
F015	96%
F015E	90%
F016	90%
F117	95%
H053	90%
H060	90%
KC135	95%
SOF130	90%
T037	96%
T038	93%
Other	90%

Figure 4: FY04 Aircraft Availability Targets by MD

By continuously measuring results to the established Aircraft Availability targets, end delivery to the warfighter remains the ultimate driver of the supply chain. Constant reporting procedures help to ensure that the process operates effectively and delivery goals are attained.

Figure 5: AA to funding distribution

It is important to note that the distribution relating Aircraft Availability and funding can be precipitous. Even the slightest reduction in funding can result in a significant drop in Aircraft Availability. Likewise, if Aircraft Availability is low, the distribution forecasts a significant increase in Aircraft Availability with only a modest increase in funding.

Reporting:

Aircraft Availability

Variance from Target

	Target AA	YTD AA	MTD AA	YTD Delta	MTD Delta
A-10	97.0	87.9	94.9	-9.1	-2.1
AC-130	90.0	92.0	94.0	2.0	4.0
B-1	95.0	88.2	69.0	-6.8	-26.0
B-52	90.0	87.6	80.5	-2.4	-9.5
C-130	91.0	89.0	91.3	-2.0	0.3
C-135	90.0	100.0	94.6	10.0	4.6
C-141	97.0	86.7	94.0	-10.3	-3.0
C-5	92.0	83.7	88.8	-8.3	-3.2
C-9	90.0	97.1	96.1	7.1	6.1
E-3	95.0	91.4	98.9	-3.6	3.9
E-4	90.0	89.3	86.8	-0.7	-3.2
EC-130	90.0	90.0	87.8	0.0	-2.2
EC-135	90.0	96.6	81.2	6.6	-8.8
F-111	90.0	N/A	93.9	N/A	3.9
F-117	95.0	95.9	100.0	0.9	5.0
F-15	94.0	90.6	91.2	-3.4	-2.8
F-15E	90.0	90.2	91.0	0.2	1.0

	Target AA	YTD AA	MTD AA	YTD Delta	MTD Delta
F-16	90.0	89.3	90.7	-0.7	0.7
F-4	90.0	N/A	95.7	N/A	5.7
H-1	90.0	N/A	91.8	N/A	1.8
HC-130	90.0	84.4	82.1	-5.6	-7.9
KC-10	97.0	94.3	98.8	-2.7	1.8
KC-135	95.0	90.7	90.8	-4.3	-4.2
LC-130	90.0	83.4	81.4	-6.6	-8.6
MC-130	90.0	89.3	86.7	-0.7	-3.3
MH-53	90.0	88.3	88.7	-1.7	-1.3
MH-60	90.0	N/A	69.5	N/A	-20.5
RC-135	90.0	86.3	79.3	-3.7	-10.7
T-37	96.0	97.2	95.6	1.2	-0.4
T-43	90.0	99.8	95.8	9.8	5.8
TC-135	90.0	86.8	89.8	-3.2	-0.2
UH-1	90.0	92.2	85.5	2.2	-4.5
WC-130	90.0	87.3	82.1	-2.7	-7.9

Legend:

- Within +/-2%
- < -2% and > -4%
- < -4%
- > +2%

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Figure 6: Aircraft Availability Reporting Chart – note that Cannibalizations, Laterals and Non-project-coded kit issues can and will artificially inflate Aircraft Availability.

Aircraft Availability is reported monthly by AFMC/LGIP. Slides are distributed to ALCs and WS SCMs. WS SCMs not within +/- 2% of their assigned Aircraft Availability target will provide additional information during the monthly MSD VTC.

Banding includes yellow and red bands for performance below target and a dark green band for performance that significantly exceeds target (which may indicate resources are being directed to the weapon system to the detriment of other systems).

Suggested Follow-on Analysis: Flying Hour Variance (See Appendix 2), Total Requirements Variance (TRV), Laterals, Cannibalizations, Non-Project Coded Kit Issues**.** Additionally, TNMCS can be broken down by Budget Code to identify constraints. Efforts are underway to identify percentage contributions to TNMCS per specific Budget Code.

MICAP Hours

OPR: AFMC/LGIP

OCR: AFMC/XPS

Description: MICAP hours are accrued in a given month for items affecting mission capability that are on backorder. For every day during the month the requisition is unfilled, 24 hours are assigned to the requisition.

Calculation Formula: MICAP hours are calculated in D165B utilizing the following formula:

MICAP Hours = [(stop day – start day – 1) x 24] + [(24 – start hour) + stop hour]

Data Source: The Enterprise Data Warehouse (EDW) is the authorized source for AFMC MICAP reporting. The MART filter within EDW will apply the AFMC Business Rules to the monthly D165B (MICAP Reporting System) data file and the metrics referenced in the monthly Supply Management Activity Group (SMAG) Materiel Support Division (MSD) metric charts distributed by HQ AFMC/LGIP. EDW can be accessed through the Supply Chain Management Tool Box at **https://scm.wpafb.af.mil/**.

Business Rules: The following business rules are applied to display the MICAP data used in the AFMC Supply reporting. See Appendix 2 for the relative impact of these rules on the current data.

The AFMC MICAP metric focuses on core items represented in the following commodity codes: K = Aerospace Vehicles, L = Communications and Electronics, M=Engines, N=Support Equipment, P=Trainers. The following commodity codes are filtered: Commodity Code Q (Vehicles), R (Photographic), S (Cryptological), and V (Fire Fighter Vehicles).

Only transactions with more than zero hours are reported. The details of the impact of this filter are as follows:

- Filters Deletion ("Termination" and "Deletion" are used interchangeably in AFMCI 23-110 - this document will use Deletion) Code 9 (Reported transaction in error) and Deletion Code B (Automatic termination of transaction after base failed to respond to 3 consecutive interrogations by the D165B) transactions that are 0-hour transactions.

- Filters Deletion Code 3 (satisfied through lateral support) transactions that are 0-hour transactions. Note: Some Deletion Code 3 transactions are not 0-hour (like lateral transfers between bases) and are included in reporting (but incidents for Deletion Code 3, Advice Code L transactions are not counted).

- Filters Deletion Code 6 (Received from Base Assets) or Deletion Code 7 (War Readiness Materiel (WRM) asset used to meet requirement) transactions that are mated with an advice code of W (WRM Asset used to preclude MICAP). D165B sets the MICAP hours to 0 for such transactions.

Only Budget Code 8 transactions MICAP hours and incidents are counted to focus the report on Materiel Support Division (MSD) items.

Only transactions where AFMC is the primary source of supply are considered. The MART filter does not count transactions for items that are local purchased or where the Air Force is Secondary Inventory Control Agency (SICA). Acquisition Code "L" (Local Purchase) and Non-Consumable Item Materiel Support Code (NIMSC) 5 transactions, where Air Force is the SICA, are excluded from reporting. An important note regarding NIMSC 5 transactions – in FY05, they will no longer be excluded in order to align efforts with other MSD metrics. This change was originally going to take place for FY04 and as such, it is necessary to pull the NIMSC 5 business object in addition to the MART filter object in EDW in order to properly apply AFMC business rules.

Transactions with missing Air Logistics Center (ALC) information are filtered. Where a null value exists in the ALC field, the record is filtered in accordance with the 23 August 2001 BIAT MICAP Business Rules. The ALC field is used to link transactions to the appropriate ALC rather than the Source of Supply (SOS) field (D165B erroneously used the Routing Identifier as the SOS).

Transactions are associated with Supply Chain Managers (SCMs) by merging transactions with D043 (Item Management Control System)-supplied Manager Designator Code (MDC) data that is updated monthly. While other fields can be utilized to link transactions to SCMs, the standard used in AFMC is the first character of the MDC field in D043.

Transactions are linked to MAJCOMs by a join on the Stock Record Account Number (SRAN) field utilizing the Enterprise Data Warehouse (EDW) SRAN-Major Command (MAJCOM) table. The EDW MICAP SRAN-to-MAJCOM association process is the same.

Performance Targets:

	SCM Program (Pre-reorg Name)		FY04 Goal
MICAP HOURS	OC PSA/PSX	ATCLS & HF Global Comm Systems	56,019
	OC PSB	B-1	10,795
	OC PSW	E-3	1,581
	OC PSL	B-2	2,866
	OC PSM	Cruise Missiles	6,272
	OC LC	KC-135	44,498
	OC LH	B-52	5,573
	OC LGR	Airborne Accessories	377,649
	OC LP	Engines	675,595
	OC-ALC		***1,180,848***
	OO LC	Mature Acft	47,110
	OO LGF	F-16	148,000
	OO LGM	ND Numbers	4,700
	OO LHI	C3I	85,900
	OO LHJ	Space	5,580
	OO LGH	Landing Gear	107,630
	OO LM	ICBM	8,400
	OO WM	Munitions/Tanks	2,950
	OO YW	Trainers	0
	OO-ALC		***410,270***
	WR LB	C-130	28,436
	WR LE	Equipment & Vehicles	201,215
	WR LF	F-15	51,741
	WR LM	Space & Special Systems	7,436
	WR LS	Combat Electronic Systems	156,470
	WR LT	Strategic Air	116,759
	WR LU	Special Operations	28,262
	WR-ALC		***590,319***
	AFMC		***2,181,437***

Figure 7: FY04 MICAP Hours Targets

The targets shown above are the results of the FY04 target-setting process.

Reporting: ALCs shall submit MICAP metric charts to HQ AFMC no later than two business days prior to the monthly Working Capital Fund Video Teleconference (VTC), and report to HQ AFMC/LG during the VTC. This monthly reporting should provide HQ AFMC with 12 months of data and narrative needed to explain MICAP trends to HQ USAF.

HQ AFMC/LGIP pulls monthly MICAP data from the web-based MICAP Analysis and Reporting Tool (MART), and provides charts to each ALC. Each ALC then has the opportunity to review the data and provide analysis that explains major spikes in performance or negative trends in MICAP hours or incidents. The ALCs will report the MICAP hours and incidents to HQ AFMC on MS Power Point slide charts in a format consistent to the samples in Figure 7 (OC-ALC will report MICAPs for the Propulsion directorate separately). The numbers reported shall be consistent with the numbers provided by HQ AFMC/LGIP. Any disagreement with or errors found in the numbers should be discussed with HQ AFMC/LGIP and altered only with HQ AFMC/LGIP approval.

For reporting purposes, color banding will be used to quickly identify performance. For FY04, meeting goal will be identified by green, within 10% as yellow, and above 10% as red.

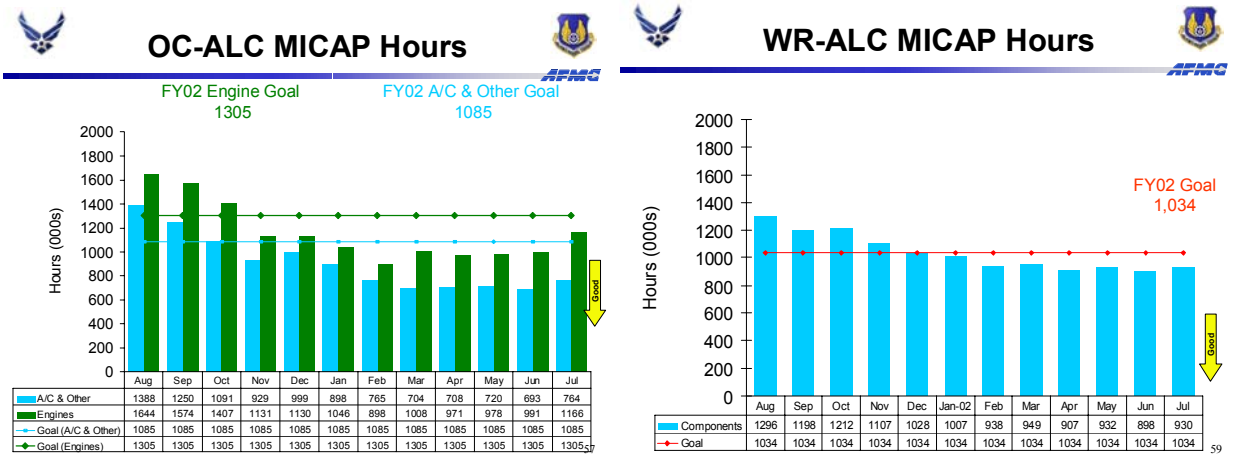


Figure 8: ALC MICAP Hours Reports

Analysis should be summarized with enough detail to explain trends, spikes, or dips reflected by the data. Analysis should include drill downs, which help isolate areas that are influencing trends, spikes, and dips. There are two primary ways to address trend causes.

- One explanation for trends is the identification of problems or improvements that have impacted the number of MICAP hours. There are four primary elements that need to be reported for this type of explanation.
    - Identify the problem(s) (e.g., shop constraint by shop or higher level) or improvements (e.g., increased production by shop or higher level) that have impacted the trend.

- Explain the cause(s) of the problem(s) (e.g., poor planning of equipment needs or unplanned equipment failure) or improvement(s) (e.g., new or repaired test equipment).

- Discuss actions that have been/are being taken, or planned to resolve support problems (applies only to negative trend).

- Provide get-well dates, in terms of when applicable MICAP backorders will be satisfied (applies only to negative trend).

- Another explanation for trends is item specific; activity related to one or more specific items that has impacted the number of MICAP hours. There are three primary elements that need to be reported for this type of explanation.

  - Identify the item(s) (NSN, nomenclature, applicable end item)

  - Explain action pertaining to the item(s) that degraded trend (e.g., change from budget code M to 8 for items with many MICAP hours) or improved trend (e.g., filled MICAP backorders with many hours).

  - Provide item MICAP get-well dates (applies only to negative trend)

- Avoid explaining trends by simply identifying top driver NSNs. Instead, try identifying NSNs that have a significant total requirements variance (ADO + Laterals + Non-Project-Coded Kit Issues versus EBO).

This analysis should be summarized in supplementary note pages, and discussed during the monthly VTCs. Ensure high impact issues get discussed if the amount of content exceeds the time available during the VTC.

Suggested Follow-on Analysis: EDW (See Appendix 1, Section A), MART (See Appendix 1, Section B), TRV (See Process Indicators), Flying Hour Variance (See Appendix 2), High Impact Target (HIT) list (See Appendix 1, Section C), EXPRESS Supportability Summary (See Appendix 1, Section D).

Customer Wait Time (CWT)

OPR: AF/IL

OCR: AF/LGIR

Description: Measures the average time elapsed between issuance of a customer order and satisfaction of that order including the wait time between the retail supply issue and delivery to the base customer – expressed in days. CWT differs from LRT in that it includes immediate issues. Additionally, it also includes the delivery time between retail supply customer and the warfighter. Only requisitions that have been completely satisfied are included in CWT. Unlike LRT, requisitions for RSP or replenishment of base stock levels are not included. This is the AF mandated measure of pipeline performance.

Calculation Formula:

$$CWT_{days} = \text{Warfighter Receipt Date} - \text{Requisition Serial Date}^*$$

* Equation holds true for in-line processing. For manual documents, Julian dates are used

Data Source: The official source of CWT data will be the Pipeline Performance and Analysis System (PPAS), available on the WSMIS web site **http://www.wsmis.day.disa.mil/.**

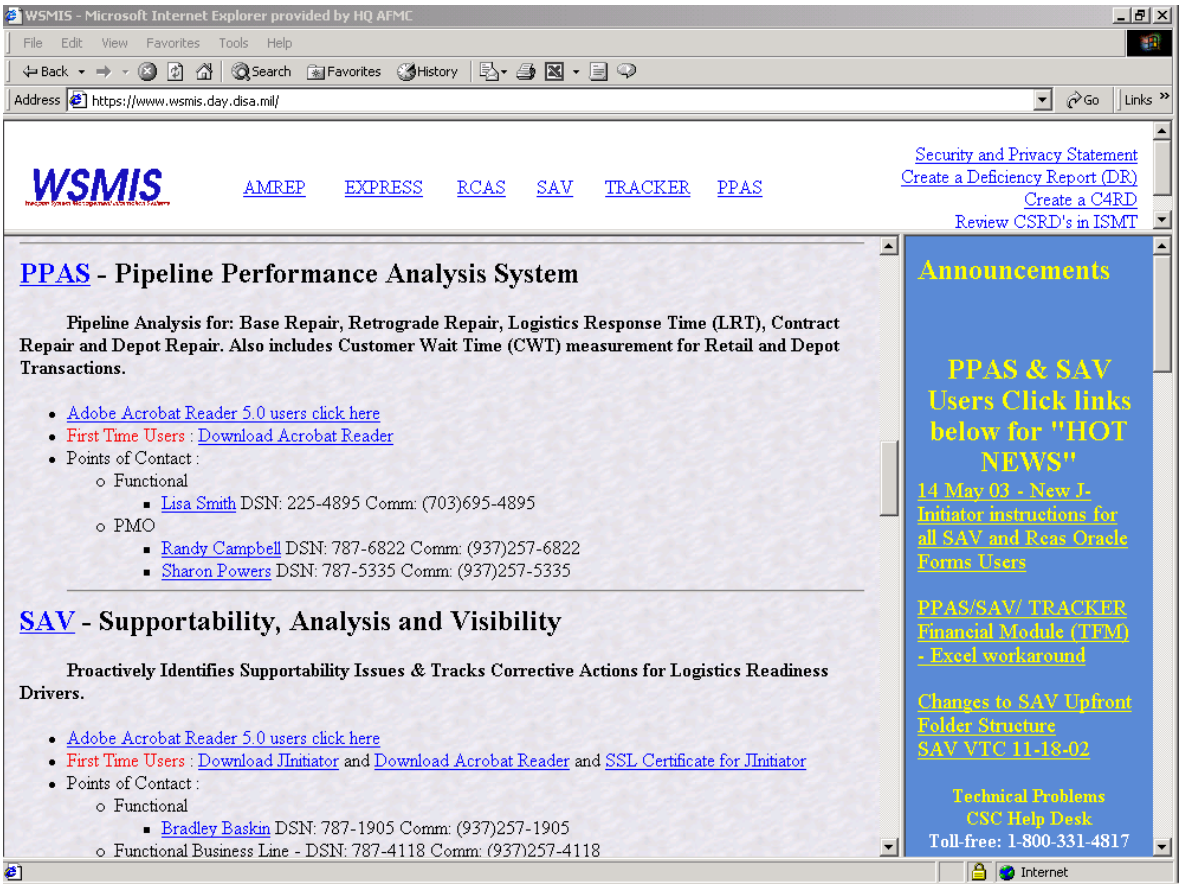


Figure 9: Weapon System Management Information System (WSMIS)

Business Rules: AFMC business rules for reporting AFMC specific CWT metrics are addressed in this section, and are defined as parameters applied to the WSMIS Cognos-based CWT Tool.

- The parameters are set within the CWT Tool using filters called dimensions. The CWT Tool's "cubed" analysis function allows the user to set dimensions and display an array of different CWT data. To get to this analysis function, the user logs into PPAS, then *Analysis*, and then *CWT Analysis*. To set up the "cubed" analysis matrix to capture the CWT data required to support these business rules, the following dimension settings are made (refer to the CWT Tool User's Manual for assistance). Using drop down menus under each of the following dimension windows, select the appropriate dimension:

    - Under *Supply Management*, select *Air Force*
    - Under *Partial Indicator*, select *Excluding Partials*
    - Under *10 Day Rule*, select *Valid*
    - Under *Budget Code*, select *8*
    - Under *Weapon System* (at bottom left of screen), select *Air Force, FHZ, FGZ, FLZ and All Force*

  * Note: By the end of CY03, D035K data will be included in Budget Code 8. Therefore, to avoid seeing an increase in CWT and to view data as the FY04 targets were established, users should be sure to select *Data Type*, SBSS.

- In order to report the number of requisitions aggregated by length in days, change CWT days to "0-10" and ">10" with the above criteria.

- Setting the *Supply Management* dimension at *Air Force* limits the displayed CWT data to Air Force supply support only. The *Partial Indicator* dimension, set at *Excluding Partials*, sets the tool up to only count a transaction when it satisfies the balance of the quantity ordered in the requisition (This is a USAF business rule, which assumes the customer waits until the complete order quantity has been delivered and is available). The *Valid* selection, under the *10 Day Rule* discards, from the average CWT calculation, ISU and MSI transactions that take over ten days (This is a USAF business rule, which assumes any ISU and MSI transactions over 10 days old was reported in error.). *Budget Code* of *8* limits the results to MSD items only. Finally, changing the lower left dimension to *Air Force* provides an ALC breakout.

Performance Targets:

	SCM Program (Pre-reorg Name)		FY04 Goal
CUSTOMER WAIT TIME	OC PSA/PSX	ATCLS & HF Global Comm Systems	19.33
	OC PSB	B-1	12.03
	OC PSW	E-3	13.25
	OC PSL	B-2	6.01
	OC PSM	Cruise Missiles	27.43
	OC LC	KC-135	15.44
	OC LH	B-52	9.23
	OC LGR	Airborne Accessories	6.38
	OC LP	Engines	7.47
	OC-ALC		***7.00***
	OO LC	Mature Acft	22.23
	OO LGF	F-16	7.20
	OO LGM	ND Numbers	180.00
	OO LHI	C3I	28.00
	OO LHJ	Space	17.00
	OO LGH	Landing Gear	5.87
	OO LM	ICBM	20.00
	OO WM	Munitions/Tanks	18.74
	OO YW	Trainers	5.00
	OO-ALC		***8.85***
	WR LB	C-130	6.00
	WR LE	Equipment & Vehicles	41.00
	WR LF	F-15	6.20
	WR LM	Space & Special Systems	18.00
	WR LS	Combat Electronic Systems	7.50
	WR LT	Strategic Air	7.70
	WR LU	Special Operations	11.35
	WR-ALC		***9.90***
	AFMC		***8.34***

Figure 10: FY04 CWT Targets

The targets shown above are the results of the FY04 Target setting process. The AFMC goal is based on a weighted average number of transactions by ALC in FY03.

Reporting: Similar to established AFMC Supply metrics, CWT data shall be submitted to HQ AFMC at least two business days before the monthly video teleconference (VTC) and reported to HQ AFMC/LG during the VTC. This monthly reporting should provide HQ AFMC with 12 months of data and narrative needed to explain CWT trends to HQ USAF, quarterly. By exception, HQ AFMC will require additional analyses from the ALCs to support the quarterly reporting to HQ USAF. The ALCs are required to report, to HQ AFMC, only the average CWT for support provided by their respective centers.

HQ AFMC/LGIP pulls monthly CWT data from the web-based tool and provides CWT charts to each ALC. Each ALC then has the opportunity to review the data and provide analysis that explains major spikes in performance or negative trends in CWT. The ALCs will report the average CWT to HQ AFMC on MS Power Point slide charts in a format consistent to the sample, below, and the numbers reported shall be consistent with the numbers provided by HQ AFMC/LGIP. Any disagreement with or errors found in the numbers should be discussed with HQ AFMC/LGIP, and altered only with HQ AFMC/LGIP approval.

For reporting purposes, color banding will be used to quickly identify performance. For FY04, meeting goal will be identified by green, within 2% as yellow, and above 2% as red

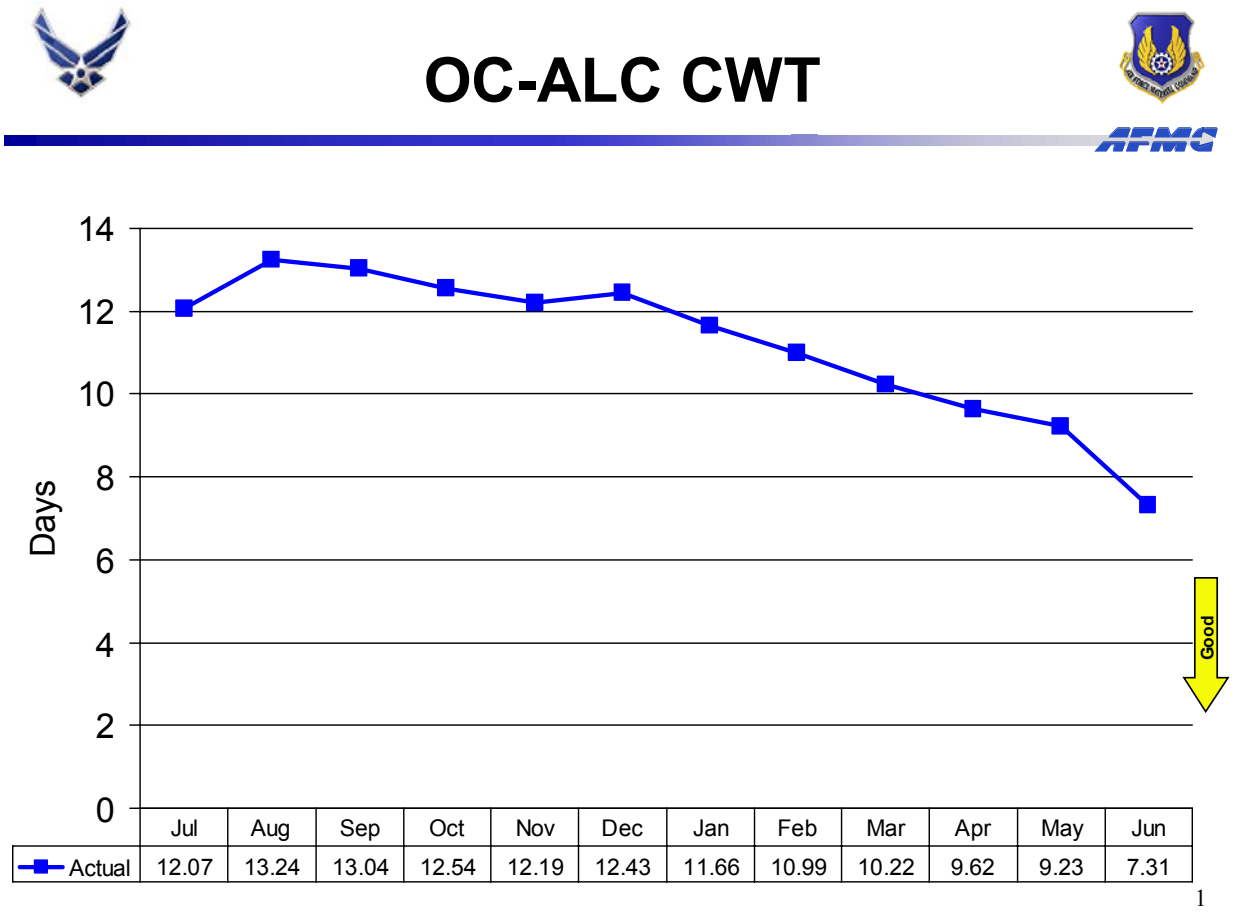


Figure 11: ALC CWT Reporting Chart

When the CWT metric reveals a negative trend, problems have typically already been resolved. That is because CWT measures are determined when orders are filled. So, CWT may look good, even though numerous old backorders are amassing, and not until they are filled does it adversely impact the CWT. At this point the problem that prevented backorders from getting filled has most likely been resolved. Conversely, when CWT is long, there may actually be positive things happening; for example, the depot may be filling a large number of backorders, including many old backorders, which drives up CWT. For this reason, the analysis should study short as well as long customer wait times.

- Explain whether short CWT is a function of good things happening or a problem. Is it getting shorter because we are doing a better job (e.g., filling more orders immediately or filling more backorders quickly), or because we are struggling in some area (e.g., filling few demands quickly, but filling even fewer old demands)? The following should be reported:
    - Identify the problem(s) (e.g., shop constraint by shop or higher level, if applicable) or improvements (e.g., increased production by shop) that impacted the trend.
    - Explain the cause(s) of the problem(s) (e.g., poor planning of equipment needs or unplanned equipment failure) or improvement(s) (e.g., new or repaired test equipment).
    - Discuss actions that have been/are being taken, or planned to resolve support problems (applies only to negative trend).
    - Provide get-well dates (applies only to negative trend).
- Explain whether long CWT is a function of a problem or good things happening. Is it getting longer because we are struggling in some area (e.g., fewer demands filled immediately or fewer backorders being filled quickly), or we are doing a better job (e.g., consistently filling new demands and backorders quickly, while filling an increasing number of old backorders)? The following should be reported:
    - Identify the problem(s) (e.g., shop constraint by shop or higher level, if applicable) or improvements (e.g., increased production by shop or higher level) that impacted the trend.
    - Explain the cause(s) of the problem(s) (e.g., poor planning of equipment needs or unplanned equipment failure) or improvement(s) (e.g., new or repaired test equipment).
    - Discuss actions that have been/are being taken, or planned to resolve support problems (applies only to negative trend).
    - Provide get-well dates (applies only to negative trend).

- Avoid explaining trends by identifying top driver NSNs. Often, they represent various problems, but not necessarily the problem(s) that caused the trend. They indeed may have significantly contributed to long CWT, but they may have been for months, even when CWT was short.

This analysis should be summarized in supplementary note pages, and discussed during the monthly VTCs. Ensure high impact issues get discussed if the amount of content exceeds the time available during the VTC.

Suggested Follow-on Analysis: Pipeline Segment Analysis, Backorders, TRV (See Process Indicators)

Net Operating Result (NOR)

OPR: AFMC/FM

OCR: AFMC/LGIF

Description: Net Operating Result (NOR) is the difference between revenue and expenses or a bottom line profit and loss indicator. It is the net result from operations. NOR is used as a performance measure of how activity groups perform in relation to the standard established.

Calculation Formula:

NOR = Total Revenues – Total Expenses

Total Revenue = (Gross Sales - Credit Returns) + Direct Reimbursable Revenue + JV
Total Expenses = Buy + Repair + Overhead + Direct Reimbursable expenses + JV
JV = Journal Variance. Miscellaneous Account Ledger used for accounting purposes to record expenses and revenues that are not adequately captured in other accounts. For example, the expenses lost from a warehouse roof collapsing.

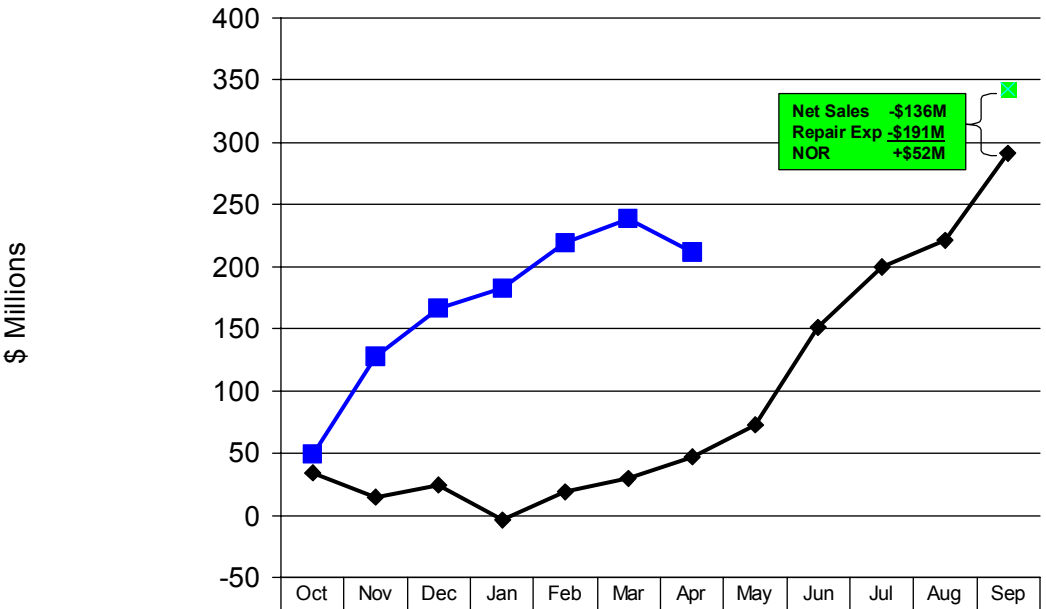
Data Source: The NOR is calculated in the Cash Flow Income Statement (CFIS). The CFIS is populated by pulling the General Ledger Account (GLA) data from the Keystone system.

Business Rules: Revenue and expenses are pulled directly from the monthly CFIS. No additional business rules are applied.

Performance Targets: The DoD and AF objective for the Supply Management Activity Group (SMAG) is to break even over a two-year budget cycle. This is accomplished by setting customer prices to offset the net prior-year profit or loss during the upcoming budget year. A positive NOR would mean the mission area revenues exceeded its expenses, indicating customers may have been overcharged. A negative NOR would indicate that expenses exceeded revenues. This may be attributed to several causes, including: undercharging customers and expense rates exceeding revenue rates. When the NOR does not equal zero, the amount of the NOR is rolled into the Accumulated Operating Result (AOR). The amount moved into the AOR is either collected or given back two years later in the rates which are used in setting the price for any given year.

Reporting:

OC-ALC MSD NOR



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Plan	34	15	24	-3	19	30	47	73	151	200	221	291
NOR	49	128	167	183	219	238	212					
Variance	15	113	143	186	200	208	165					
Revised EOY Projection												343

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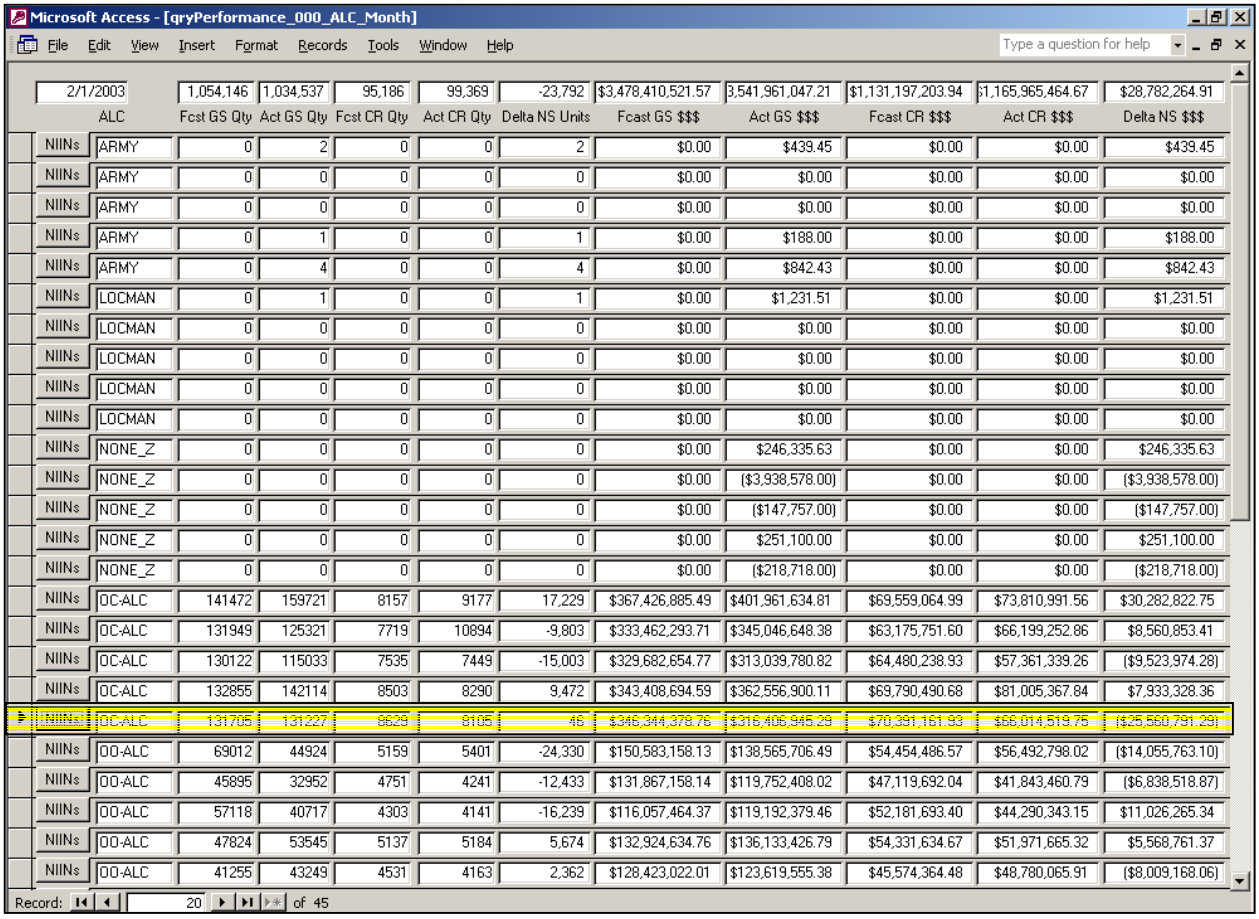
Figure 12: ALC NOR Reporting Chart

Suggested Follow-on Analysis: Follow-on analysis should be performed on all NORs including those equal to or near zero. Aggregation of the NOR may mask problems that are more readily apparent at a granular level. This additional analysis should include:

- Buy Forecast vs. Actual
- Repair Forecast vs. Actual
- Expense Category Forecast vs. Actual
- Revenue Category Forecast vs. Actual
    - Sales (by NIIN) Forecast vs. Actual
    - Reimbursement Forecast vs. Actual

The process of drilling through aggregate results to actual findings by NIIN can produce results that differ greatly, in terms of variance, from reported levels as shown by the following example.

Figure 15 shows an example drill down analysis using an AFMC database. The highlighted row accounts for the largest variance between forecasted and actual net sales.



Microsoft Access - [qryPerformance_000_ALC_Month]

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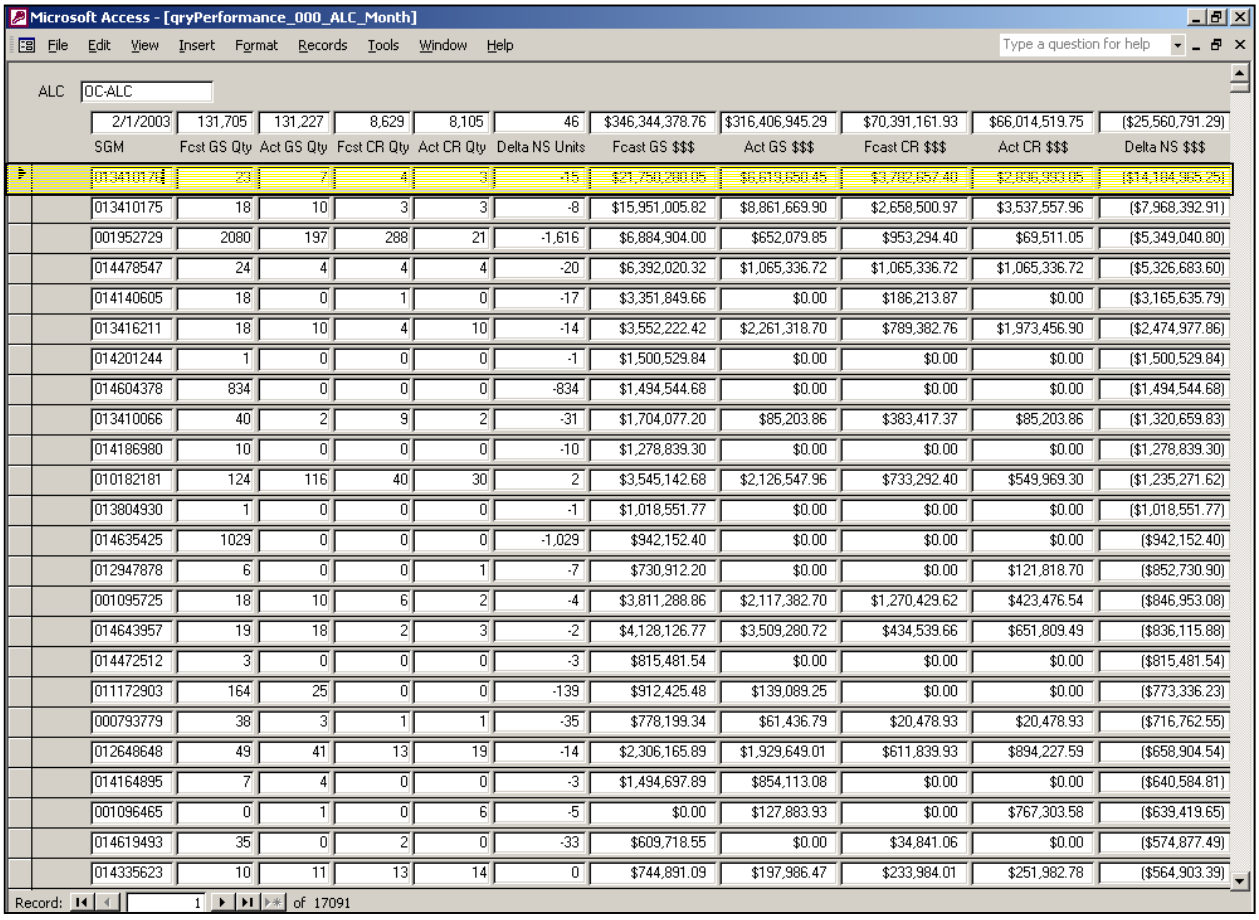
	2/1/2003	1,054,146	1,034,537	95,186	99,369	-23,792	$3,478,410,521.57	3,541,961,047.21	$1,131,197,203.94	$1,165,965,464.67	$28,782,264.91	
	ALC	Fcst GS Qty	Act GS Qty	Fcst CR Qty	Act CR Qty	Delta NS Units	Fcast GS $$$	Act GS $$$	Fcast CR $$$	Act CR $$$	Delta NS $$$	
NIINs	ARMY	0	2	0	0	2	$0.00	$439.45	$0.00	$0.00	$439.45	
NIINs	ARMY	0	0	0	0	0	$0.00	$0.00	$0.00	$0.00	$0.00	
NIINs	ARMY	0	0	0	0	0	$0.00	$0.00	$0.00	$0.00	$0.00	
NIINs	ARMY	0	1	0	0	1	$0.00	$188.00	$0.00	$0.00	$188.00	
NIINs	ARMY	0	4	0	0	4	$0.00	$842.43	$0.00	$0.00	$842.43	
NIINs	LOCMAN	0	1	0	0	1	$0.00	$1,231.51	$0.00	$0.00	$1,231.51	
NIINs	LOCMAN	0	0	0	0	0	$0.00	$0.00	$0.00	$0.00	$0.00	
NIINs	LOCMAN	0	0	0	0	0	$0.00	$0.00	$0.00	$0.00	$0.00	
NIINs	LOCMAN	0	0	0	0	0	$0.00	$0.00	$0.00	$0.00	$0.00	
NIINs	LOCMAN	0	0	0	0	0	$0.00	$0.00	$0.00	$0.00	$0.00	
NIINs	NONE_Z	0	0	0	0	0	$0.00	$246,335.63	$0.00	$0.00	$246,335.63	
NIINs	NONE_Z	0	0	0	0	0	$0.00	($3,938,578.00)	$0.00	$0.00	($3,938,578.00)	
NIINs	NONE_Z	0	0	0	0	0	$0.00	($147,757.00)	$0.00	$0.00	($147,757.00)	
NIINs	NONE_Z	0	0	0	0	0	$0.00	$251,100.00	$0.00	$0.00	$251,100.00	
NIINs	NONE_Z	0	0	0	0	0	$0.00	($218,718.00)	$0.00	$0.00	($218,718.00)	
NIINs	OC-ALC	141472	159721	8157	9177	17,229	$367,426,885.49	$401,961,634.81	$69,559,064.99	$73,810,991.56	$30,282,822.75	
NIINs	OC-ALC	131949	125321	7719	10894	-9,803	$333,462,293.71	$345,046,648.38	$63,175,751.60	$66,199,252.86	$8,560,853.41	
NIINs	OC-ALC	130122	115033	7535	7449	-15,003	$329,682,654.77	$313,039,780.82	$64,480,238.93	$57,361,339.26	($9,523,974.28)	
NIINs	OC-ALC	132855	142114	8503	8290	9,472	$343,408,694.59	$362,556,900.11	$69,790,490.68	$81,005,367.84	$7,933,328.36	
NIINs	OC-ALC	131705	131227	8629	8105	46	$346,344,378.76	$316,406,945.29	$70,391,161.93	$66,014,519.75	($25,560,791.29)	
NIINs	OO-ALC	69012	44924	5159	5401	-24,330	$150,583,158.13	$138,565,706.49	$54,454,486.57	$56,492,798.02	($14,055,763.10)	
NIINs	OO-ALC	45895	32952	4751	4241	-12,433	$131,867,158.14	$119,752,408.02	$47,119,692.04	$41,843,460.79	($6,838,518.87)	
NIINs	OO-ALC	57118	40717	4303	4141	-16,239	$116,057,464.37	$119,192,379.46	$52,181,693.40	$44,290,343.15	$11,026,265.34	
NIINs	OO-ALC	47824	53545	5137	5184	5,674	$132,924,634.76	$136,133,426.79	$54,331,634.67	$51,971,665.32	$5,568,761.37	
NIINs	OO-ALC	41255	43249	4531	4163	2,362	$128,423,022.01	$123,619,555.38	$45,574,364.48	$48,780,065.91	($8,009,168.06)	

Record: 20 of 45

Figure 13: Categorized Variance between Forecasted and Actual Net Sales

Figure 15 lists the NIINs that are rolled up in that record. This view reveals that NIIN 013410176 accounts for the greatest net sales variance.



Microsoft Access - [qryPerformance_000_ALC_Month]

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ALC: OC-ALC

	2/1/2003	131,705	131,227	8,629	8,105	46	$346,344,378.76	$316,406,945.29	$70,391,161.93	$66,014,519.75	($25,560,791.29)
	SGM	Fcst GS Qty	Act GS Qty	Fcst CR Qty	Act CR Qty	Delta NS Units	Fcast GS $$$	Act GS $$$	Fcast CR $$$	Act CR $$$	Delta NS $$$
▶	013410176	23	7	4	3	-15	$21,750,280.05	$6,619,650.45	$3,782,657.40	$2,836,993.05	($14,184,965.25)
	013410175	18	10	3	3	-8	$15,951,005.82	$8,861,669.90	$2,658,500.97	$3,537,557.96	($7,968,392.91)
	001952729	2080	197	288	21	-1,616	$6,884,904.00	$652,079.85	$953,294.40	$69,511.05	($5,349,040.80)
	014478547	24	4	4	4	-20	$6,392,020.32	$1,065,336.72	$1,065,336.72	$1,065,336.72	($5,326,683.60)
	014140605	18	0	1	0	-17	$3,351,849.66	$0.00	$186,213.87	$0.00	($3,165,635.79)
	013416211	18	10	4	10	-14	$3,552,222.42	$2,261,318.70	$789,382.76	$1,973,456.90	($2,474,977.86)
	014201244	1	0	0	0	-1	$1,500,529.84	$0.00	$0.00	$0.00	($1,500,529.84)
	014604378	834	0	0	0	-834	$1,494,544.68	$0.00	$0.00	$0.00	($1,494,544.68)
	013410066	40	2	9	2	-31	$1,704,077.20	$85,203.86	$383,417.37	$85,203.86	($1,320,659.83)
	014186980	10	0	0	0	-10	$1,278,839.30	$0.00	$0.00	$0.00	($1,278,839.30)
	010182181	124	116	40	30	2	$3,545,142.68	$2,126,547.96	$733,292.40	$549,969.30	($1,235,271.62)
	013804930	1	0	0	0	-1	$1,018,551.77	$0.00	$0.00	$0.00	($1,018,551.77)
	014635425	1029	0	0	0	-1,029	$942,152.40	$0.00	$0.00	$0.00	($942,152.40)
	012947878	6	0	0	1	-7	$730,912.20	$0.00	$0.00	$121,818.70	($852,730.90)
	001095725	18	10	6	2	-4	$3,811,288.86	$2,117,382.70	$1,270,429.62	$423,476.54	($846,953.08)
	014643957	19	18	2	3	-2	$4,128,126.77	$3,509,280.72	$434,539.66	$651,809.49	($836,115.88)
	014472512	3	0	0	0	-3	$815,481.54	$0.00	$0.00	$0.00	($815,481.54)
	011172903	164	25	0	0	-139	$912,425.48	$139,089.25	$0.00	$0.00	($773,336.23)
	000793779	38	3	1	1	-35	$778,199.34	$61,436.79	$20,478.93	$20,478.93	($716,762.55)
	012648648	49	41	13	19	-14	$2,306,165.89	$1,929,649.01	$611,839.93	$894,227.59	($658,904.54)
	014164895	7	4	0	0	-3	$1,494,697.89	$854,113.08	$0.00	$0.00	($640,584.81)
	001096465	0	1	0	6	-5	$0.00	$127,883.93	$0.00	$767,303.58	($639,419.65)
	014619493	35	0	2	0	-33	$609,718.55	$0.00	$34,841.06	$0.00	($574,877.49)
	014335623	10	11	13	14	0	$744,891.09	$197,986.47	$233,984.01	$251,982.78	($564,903.39)

Record: 1 of 17091

Figure 14: Variance between Forecasted and Actual Net Sales by NIIN

Further analysis into the underlying causes of this variance between forecast and actual sales begins to reveal the full story. Figure 17 shows the NIIN revenue reconciliation using SMART (System Management Analysis & Reporting Tool) and isolates the net sales variance for an ALC, by NIIN. This process could then be repeated for the next NIIN (which also happens to be a Hot Section Module). In this example, $21M of $25M variance is explained by the two top NIINs.

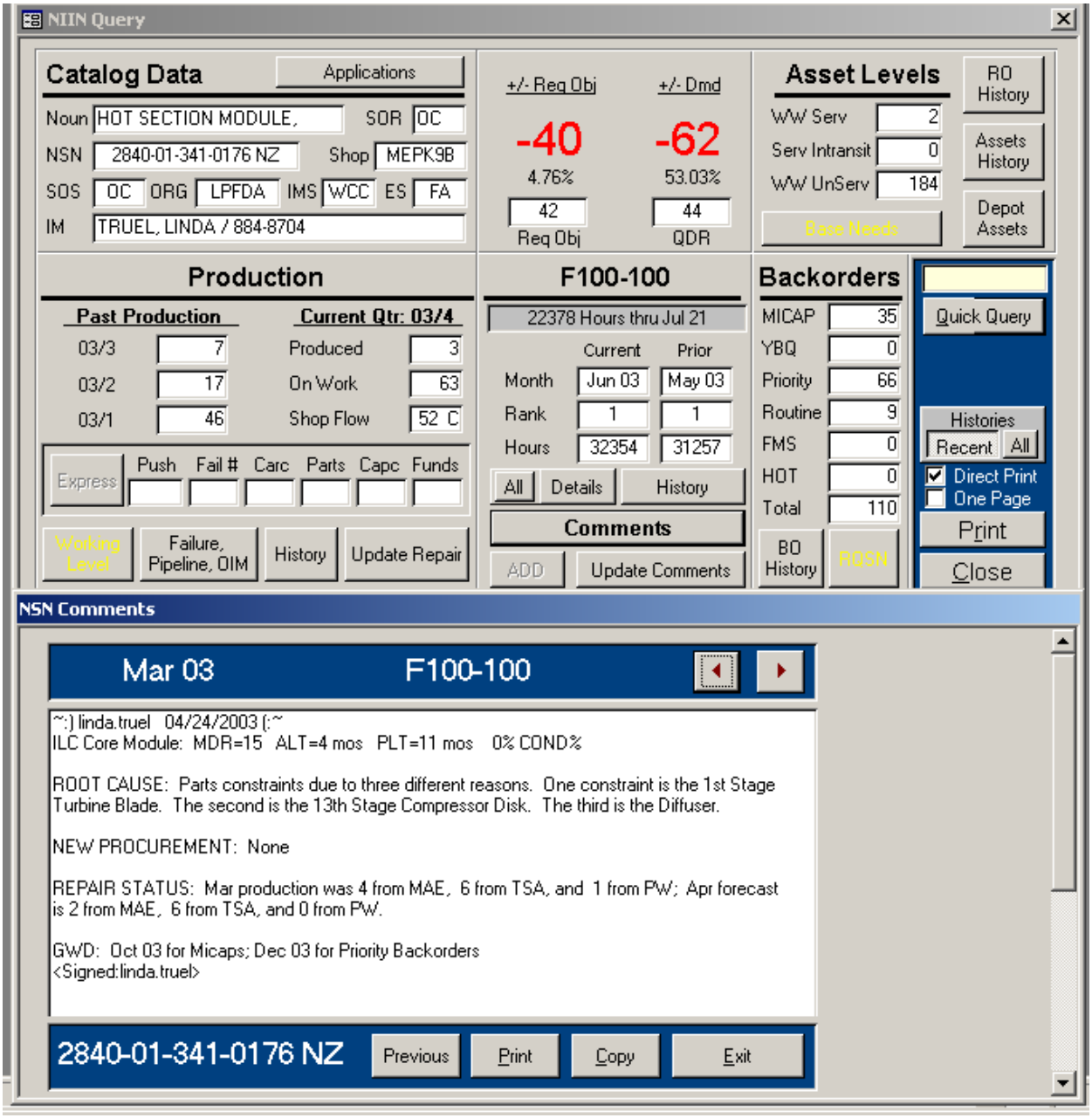


Figure 15: NIIN level net sales variance reconciliation

Process Indicators

Total Requirements Variance (TRV)

OPR: AFMC/LGIP

OCR: N/A

Description: Comparison of forecasted MSD, Retail Due-Outs (MICAPS, Awaiting Parts, Delayed Discrepancy and Due-Outs to Maintenance Backorders) versus Expected Backorders.

Calculation Formula:

TRV = (MICAPS + AWPs + Delayed Discrepancy + Due-Out to Maintenance) – Expected Backorders

Data Source: DO35E (Readiness Based Leveling – RBL) for Expected Backorders.
DO35A (Item Manager Wholesale Requisition Process) for actual Due-Outs.
SBSS for Laterals, Non-Project Coded Kit Issues (masked Actual Due-Outs).

The TRV will be accessible through the Supply Chain Management Tool Box at **https://scm.wpafb.af.mil/**.

Business Rules: The following SRANs are excluded because they are not included in the level setting process within the RBL Model due to base closure or special support rules: FB2007 – FB2014, FB2049, FB2059, FB2501, FB7033

Only Budget Code 8 transactions will be counted to focus on Materiel Support Division items.

Only reparable (ERRC "T") and reparable partials (ERRC "P") items are included.

This analysis will exclude all requisitions that are the result of data entry error into SBSS. Requisitions identified for exclusion must be approved by the data system OPR.

Only Air Force managed items are included. Transactions where the Air Force is a Secondary Inventory Control Activity (SICA), NIMSC ICA Code "S", and Non-consumable Item Management Support Code (NIMSC) of "5" are excluded.

Excludes requirements for Readiness Spares Package, Mobility kit, initial or replacement requirements in support of high priority mission support kits (AFMAN 23-110, V1, P2, CH11, Table 11A11.1).

Includes only non-replenishment stock transactions.

Only Air Force customer requisitions are included.

The data source used to obtain non-project coded kit (MSK and RSP) issues is the Consolidated Transaction History section within SBSS.

- The transaction is identified as a Maintenance Supply Issue (TRIC = MSI)
- The transaction results in a decrease in or deletion of one of the following details:
    - Mission Support Kit (MSK TTPC = 1G, 1I)

  - In-place Readiness Spares Package (IRSP TTPC = 1O, 1Q)
  - Airborne Readiness Spares Package (ARSP TTPC = 2L, 2K)
  - Mobility Readiness Spares Package (MRSP TTPC = 6C, 6E)
- The issue was made to satisfy normal replenishment (project code <> a valid project code)
- The following SRANs are being excluded because they are excluded from the level setting process within the RBL Model due to base closure or special support rules: FB2007 – FB2014, FB2049, FB2059, FB2501, FB7033

The data source used to obtain lateral requisitions is the Consolidated Transaction History section within SBSS.

- For SMAG to SMAG activities, uses the appropriate D(xx) routing identifier code
- The following SRANs are being excluded because they are excluded from the level setting process within the RBL Model due to base closure or special support rules: FB2007 – FB2014, FB2049, FB2059, FB2501, FB7033
- Only Materiel Support Division (MSD) items will be considered where the budget code = 8
- The Document Identifier Code will be either “A0x” or “SPR”
- The Transaction Type Phase Code (TTPC) will be either “1V” or “1Z”
- The specific date range of the data for lateral requisitions will be the transaction date.
- Only include Air Force requisitions. The document number must begin with “FB*”.

Performance Targets: Process indicators facilitate root-cause analysis and add additional meaning to performance measures. They are not considered performance measures and are not formally monitored against set targets. Internal targets may be set by organizations seeking to improve specific problem items or areas that have been identified to be affecting a performance measure like Aircraft Availability.

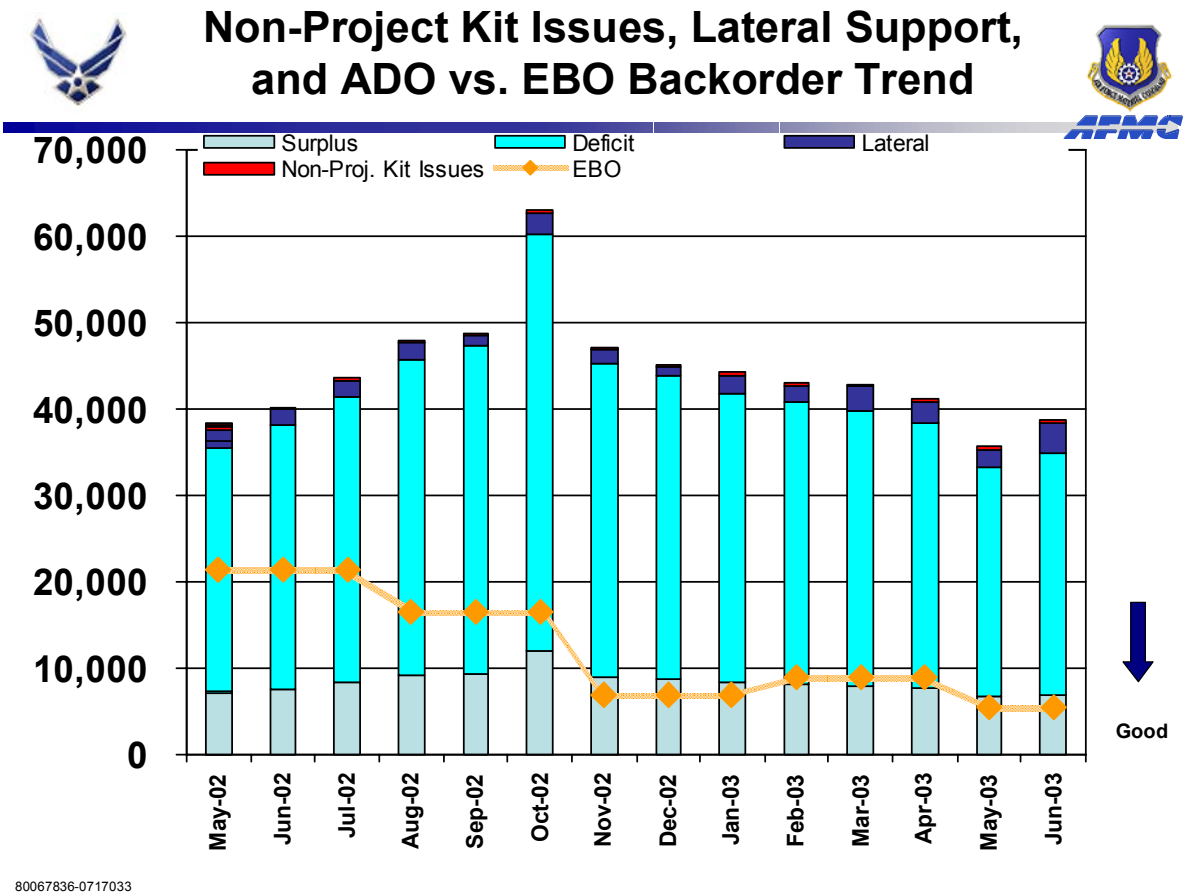
Analysis: Analysis should be summarized with ample detail to explain significant variances, trends, spikes, or dips reflected by the data. Analysis should include drill downs, which help isolate areas that are influencing trends, spikes, and dips. Explain initiatives that are having a positive effect on the EBO vs. ADO variance. Identify problems (e.g., constraints) that have adversely impacted the variance and explain what led to the problem (e.g., greater actual flight hours than projected). Also, explain actions that have been/are being taken, or planned to resolve variances. Finally, where there are major drivers, such as specific NIINs, give examples, and furnish get-well dates. Analysis should be conducted using the TRV tool to explain the underlying causes for variance between EBOs and ADOs. The TRV will calculate the variance between time-weighted average Actual Due-Outs and Expected Backorders. Analysis should include:

Aggregate ADO vs. EBO (with driver NIINs by variance and by MICAP hours)
MAJCOM ADO vs. EBO (with driver NIINs by variance and by MICAP hours)
ALC ADO vs. EBO (with driver NIINs by variance and by MICAP hours)
SCM ADO vs. EBO - option to drill down to driver NIINs by variance and by MICAP hours

Accounting for "Masked ADOs" (Laterals and Non-Project Coded Kit Issues) and categorizing ADOs by DOTM, MICAP, AWP and DD will help reveal underlying causes for variance.

Analysis should be summarized with ample detail to explain trends, spikes, or dips reflected by the data.

Suggested Follow-on Analysis: A TRV tool is under development at AFMC/LGIP. The tool will be distributed monthly through the SCM toolbox. Flying Hour Variance (See Appendix 1), High Impact Target (HIT) list (See Appendix 1), EXPRESS Supportability Summary (See Appendix 1).



	May-02	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03
ADO	35,463	36,393	38,170	41,397	45,768	47,372	60,279	45,228	43,882	41,907	40,747	39,847	38,334	33,265	34,990
LATERAL	1,996	1,702	1,804	1,888	2,021	1,236	2,406	1,757	1,011	1,963	1,950	2,780	2,583	2,123	3,317
Non-Proj. Kit Issues	421	293	138	432	248	120	378	228	227	331	350	322	283	370	380
EBO	21,529	21,529	21,529	21,529	16,477	16,477	16,477	6,953	6,953	6,953	8,906	8,906	8,906	5,596	5,596

Figure 16: TRV Trend Analysis Chart

While AFMC does not require the monthly reporting of this metric, some organizations may want to review and analyze this metric. The above chart shows the Expected (forecasted) backorders (EBO) as a line and the Actual backorders (Actual Due-Outs or ADO). The ADO portion of the bar is broken into Surplus to and Deficit. Surplus displays the quantity of ADOs that were under the EBO quantity. (How many parts did we allocate to shelves that were not needed?). Deficit displays the quantity of ADOs that exceeded the EBO quantity. (How many

parts were not present when we needed them?). Stacked on top of the Actual Due-Outs are the Non-Project Coded Kit Issues and Laterals that masked Actual Due-Outs.

This chart and many similar reports in the Total Requirements Variance Tool (currently in development at AFMC), provides a mechanism for Supply Chain Managers (SCMs) to reconcile internal processes that are generating critical spares shortages for warfighters. It also allows for the identification of over-allocated items that may be diverting needed funds from critical spares.

MICAP Incidents

While this metric is traditionally a reported MSD metric, it does not correlate directly to Aircraft Availability and can drive the wrong behavior if used inappropriately.

OPR: AFMC/LGIP

OCR: AFMC/XPS

Description: MICAP incidents are the number of MICAP requisitions accumulated for a given month. This includes MICAP transactions that were open through the entire month, open at the start of the month, open at the end of the month or open and closed within the month

Calculation Formula:

MICAP incidents = Count (MICAP requisitions)

Data Source: The Enterprise Data Warehouse (EDW) is the authorized source for AFMC MICAP reporting. The MART filter within EDW will apply the AFMC Business Rules to the monthly D165B (MICAP Reporting System) data file and the metrics referenced in the monthly Supply Management Activity Group (SMAG) Materiel Support Division (MSD) metric charts distributed by HQ AFMC/LGIP. EDW can be accessed through the Supply Chain Management Tool Box at **https://scm.wpafb.af.mil/**.

Business Rules: The following business rules are applied to display the MICAP data used in the AFMC Supply reporting. See Appendix C for the impacts of the applied business rules.

The AFMC MICAP metric focuses on core items represented in the following commodity codes: K = Aerospace Vehicles, L = Communications and Electronics, M=Engines, N=Support Equipment, P=Trainers. The following commodity codes are filtered: Commodity Code Q (Vehicles), R (Photographic), S (Cryptological), and V (Fire Fighter Vehicles).

Only transactions with more than zero hours are reported. The details of the impact of this filter are as follows:

- Filters Deletion ("Termination" and "Deletion" are used interchangeably in AFMCI 23-110 - this document will use Deletion) Code 9 (Reported transaction in error) and Deletion Code B (Automatic termination of transaction after base failed to respond to 3 consecutive interrogations by the D165B) transactions that are 0-hour transactions.

- Filters Deletion Code 3 (satisfied through lateral support) transactions that are 0-hour transactions. Note: Some Deletion Code 3 transactions are not 0-hour (like lateral transfers between bases) and are included in reporting (but incidents for Deletion Code 3, Advice Code L transactions are not counted).

- Filters Deletion Code 6 (Received from Base Assets) or Deletion Code 7 (War Readiness Materiel (WRM) asset used to meet requirement) transactions that are mated with an advice code of W (WRM Asset used to preclude MICAP). D165B sets the MICAP hours to 0 for such transactions.

Only Budget Code 8 transactions MICAP incidents are counted to focus the report on Materiel Support Division (MSD) items.

Acquisition Code "L" (Local Purchase) items are excluded from reporting.

Only transactions where AFMC is the primary source of supply are considered. MART does not count transactions for items that are local purchased or where the Air Force is Secondary Inventory Control Agency (SICA). Acquisition Advice Code L (Local Purchase) and Non-Consumable Item Materiel Support Code (NIMSC) 5 transactions, where Air Force is the SICA, are filtered.

Transactions with missing Air Logistics Center (ALC) information are filtered. Where a null value exists in the ALC field, the record is filtered in accordance with the 23 August 2001 BIAT MICAP Business Rules. The ALC field is used to link transactions to the appropriate ALC rather than the Source of Supply (SOS) field (D165B erroneously used the Routing Identifier as the SOS).

Transactions are associated with Supply Chain Managers (SCMs) by merging transactions with D043 (Item Management Control System)-supplied Manager Designator Code (MDC) data that is updated monthly. While other fields can be utilized to link transactions to SCMs, the standard used in AFMC is the first character of the MDC field in D043.

Transactions are linked to MAJCOMs by a join on the Stock Record Account Number (SRAN) field utilizing the Enterprise Data Warehouse (EDW) SRAN-Major Command (MAJCOM) table. The EDW MICAP SRAN-to-MAJCOM association process is the same.

Performance Targets: Process indicators facilitate root-cause analysis and add additional meaning to performance measures. They are not considered performance measures and are not formally monitored against set targets. Internal targets may be set by organizations seeking to improve specific problem items or areas that have been identified to be affecting a performance measure like Aircraft Availability.

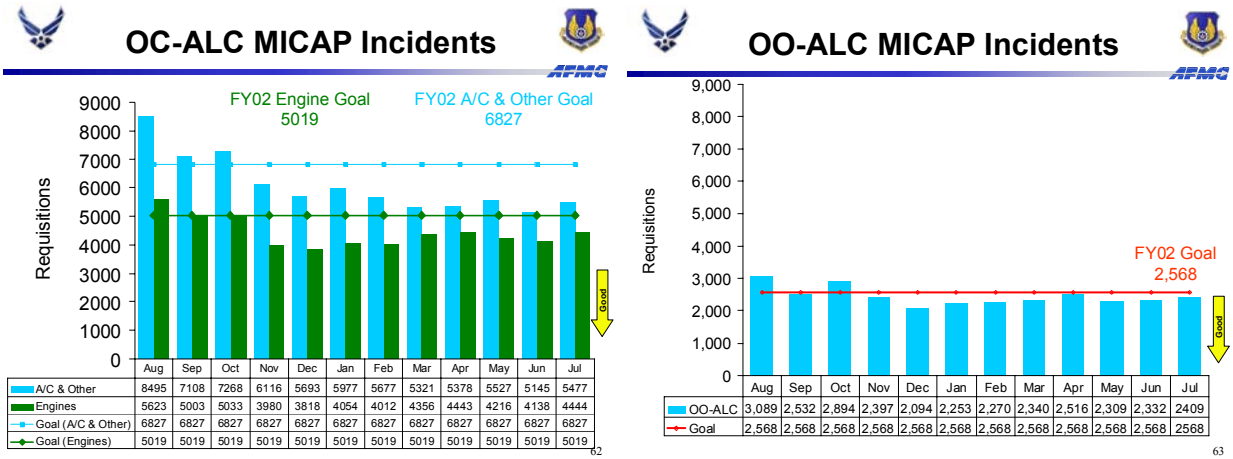


Figure 17: ALC MICAP Incidents Reporting Charts

Analysis: *While monthly reporting of this metric is not required by AFMC, some organizations may desire to continue the review and analysis of this metric.* Analysis should be summarized with ample detail to explain trends, spikes, or dips reflected by the data. Analysis should

include drill downs, which help isolate areas that are influencing trends, spikes, and dips. There are two primary ways to address causes of trends.

- One explanation for trends is the identification of problems or improvements that have impacted the number of MICAP incidents. There are four primary elements that need to be reported for this type of explanation.
    - Identify the problem(s) (e.g., shop constraint by shop or higher level) or improvements (e.g., increased production by shop or higher level) that have impacted the trend.
    - Explain the cause(s) of the problem(s) (e.g., poor planning of equipment needs or unplanned equipment failure) or improvement(s) (e.g., new or repaired test equipment).
    - Discuss actions that have been/are being taken, or planned to resolve support problems (applies only to negative trend).
    - Provide get-well dates, in terms of when applicable MICAP backorders will be satisfied (applies only to negative trend).
- Another explanation for trends is item specific; activity related to one or more specific items that has impacted the number of MICAP incidents. There are three primary elements that need to be reported for this type of explanation.
    - Identify the item(s) (NSN, nomenclature, applicable end item)
    - Explain action pertaining to the item(s) that degraded trend (e.g., change from budget code M to 8 for items with many MICAP hours) or improved trend (e.g., filled MICAP backorders with many hours).
    - Provide item MICAP get-well dates (applies only to negative trend)
- Avoid explaining trends by identifying top driver NSNs. Often, they represent various problems, but not necessarily the problem(s) that caused the trend. They indeed may have been contributors of many MICAP incidents, but they may have been for months, even when the total number of MICAP incidents was low.

Suggested Follow-on Analysis: EDW (See Appendix 1, Section A), MART (See Appendix 1, Section B), TRV (See Process Indicators), Flying Hour Variance (See Appendix 2), High Impact Target (HIT) list (See Appendix 1, Section C), EXPRESS Supportability Summary (See Appendix 1, Section D).

Issue Effectiveness (IE)

While this metric is traditionally a reported MSD metric, it does not correlate directly to Aircraft Availability and can drive the wrong behavior if used inappropriately.

OPR: AFLMA

OCR: AFMC/LGIP

Description: The AFMC issue effectiveness metric measures the percentage of the warfighter demands filled immediately.

Calculation Formula:

$$IE = \frac{Issues}{(Issues + BO_{2D} + BO_{4W})}$$

BO_{2D} = backorders authorized to stock
BO_{4W} = backorders not authorized to stock

Data Source: The Issue Effectiveness/Stockage Effectiveness (IE/SE) Tool is the authorized source for AFMC issue and stockage effectiveness reporting. Data from the Standard Base Supply System (SBSS) is used monthly to support the processing of the IE/SE Tool.

The IE/SE Tool can be accessed through the Supply Chain Management Tool Box at **https://scm.wpafb.af.mil/**.

Business Rules: Measure IE/SE by line item issues rather than by units.

- Measuring by (line item) issue captures a partial issue as two line items; one as an issue and one as a non-issue, regardless of the number of units identified in the order. Therefore, partial issues under the line item issue approach will always be recorded as 50%.

- Measuring by units, counts each unit. For example, the issue of 9 out of 10 units on an order reports as 90%.

Filter IE/SE data to include results for only Budget Code 8/Materiel Support Division (MSD) related items.

Filter IE/SE data to include results only for items that have an ALC source of supply.

Filter IE/SE data to include results only for items with Expendability, Recoverability, Reparability Category (ERRC) codes of N, P, and T. This limits IE/SE to expendable items that do not require intensified management by serialized control and reporting.

Performance Targets: Process indicators facilitate root-cause analysis and add additional meaning to performance measures. They are not considered performance measures and are not formally monitored against set targets. Internal targets may be set by organizations seeking to improve specific problem items or areas that have been identified to be affecting a performance measure like Aircraft Availability.

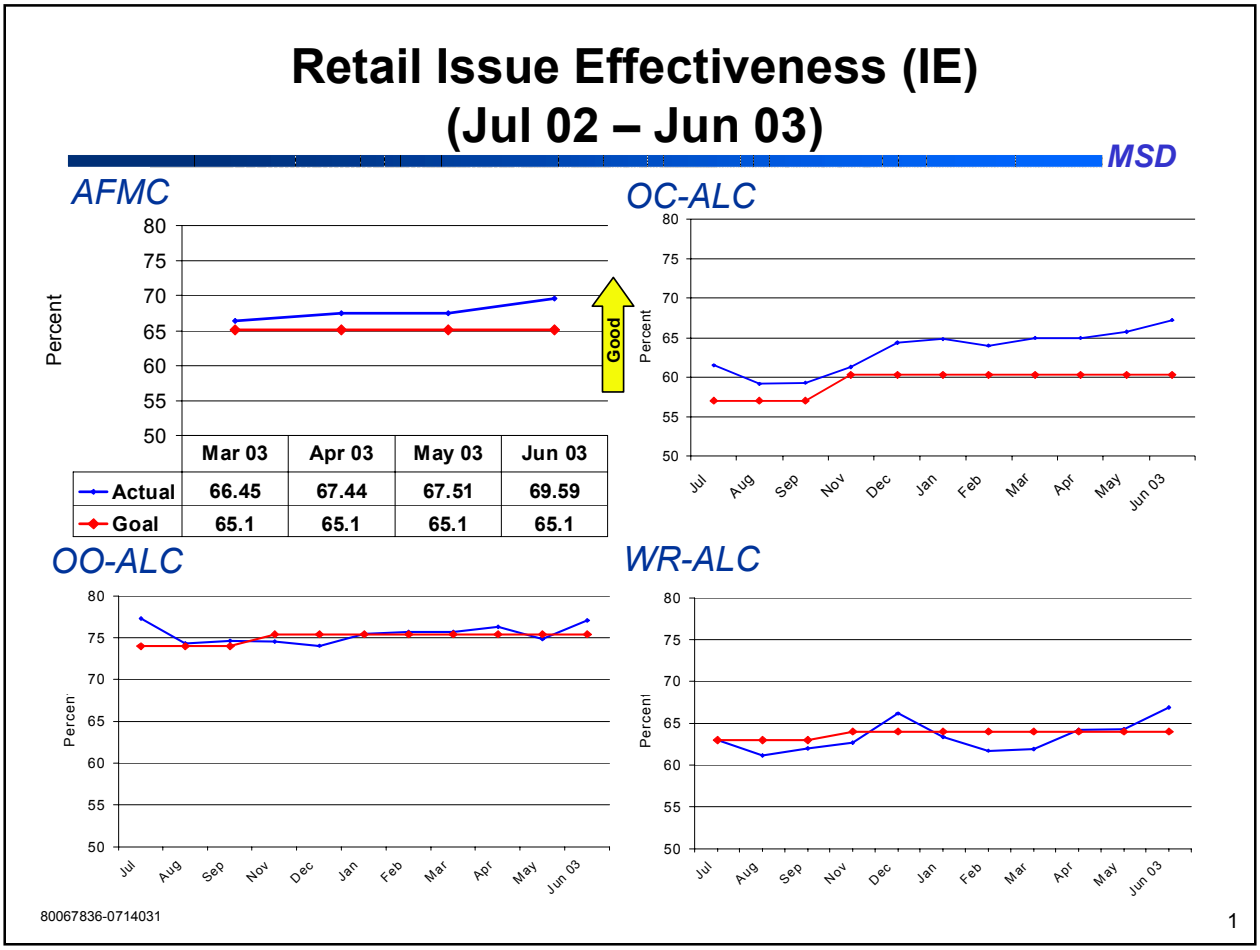


Figure 18: Retail Issue Effectiveness Trend Analysis

Analysis: *While monthly reporting of this metric is not required by AFMC, some organizations may desire to continue the review and analysis of this metric.* Figure 19 is an example of the monthly retail IE charts issued by LGIL. IE analysis can be made using these charts as a starting point. Analysis should be summarized with ample detail to explain trends, spikes, or dips reflected by the data. Analysis should include drill downs, which help isolate areas that are influencing trends, spikes, and dips. Explain initiatives that are having a positive effect on the IE/SE trends. Identify problems (e.g., constraints) that have adversely impacted the backorder trend, and explain what led to the problem (e.g., poor planning of equipment needs or unplanned equipment failure). Also, explain actions that have been/are being taken, or planned to resolve support problems. Finally, where there are major drivers, such as specific NSNs, give examples, and furnish get-well dates.

Suggested Follow-on Analysis: Supply Chain Manager's Metric Tool (SCM_2T) (See Appendix 1, Section E)

Stockage Effectiveness (SE)

While this metric is traditionally a reported MSD metric, it does not correlate directly to Aircraft Availability and can drive the wrong behavior if used inappropriately.

OPR: AFLMA

OCR: AFMC/LGIP

Description: Stockage effectiveness is also the percentage of warfighter demands filled immediately, but is limited to items authorized for stockage at the warfighters' locations.

Calculation Formula:

$$SE = \frac{Issue}{(Issue + BO_{2D})}$$

BO_{2D} = backorder authorized to stock

Data Source: The Issue Effectiveness/Stockage Effectiveness (IE/SE) Tool is the authorized source for AFMC issue and stockage effectiveness reporting. Data from the Standard Base Supply System (SBSS) is used monthly to support the processing of the IE/SE Tool.

The IE/SE Tool can be accessed through the Supply Chain Management Tool Box at **https://scm.wpafb.af.mil/**.

Business Rules: Measure IE/SE by line item issues rather than by units.

- Measuring by (line item) issue captures a partial issue as two line items; one as an issue and one as a non-issue, regardless of the number of units identified in the order. Therefore, partial issues under the line item issue approach will always be recorded as 50%.

- Measuring by units, counts each unit. For example, the issue of 9 out of 10 units on an order reports as 90%.

Filter IE/SE data to include results for only Budget Code 8/Materiel Support Division (MSD) related items.

Filter IE/SE data to include results only for items that have an ALC source of supply.

Filter IE/SE data to include results only for items with Expendability, Recoverability, Reparability Category (ERRC) codes of N, P, and T. This limits IE/SE to expendable items that do not require intensified management by serialized control and reporting.

Performance Targets: Process indicators facilitate root-cause analysis and add additional meaning to performance measures. They are not considered performance measures and are not formally monitored against set targets. Internal targets may be set by organizations seeking to improve specific problem items or areas that have been identified to be affecting a performance measure like Aircraft Availability.

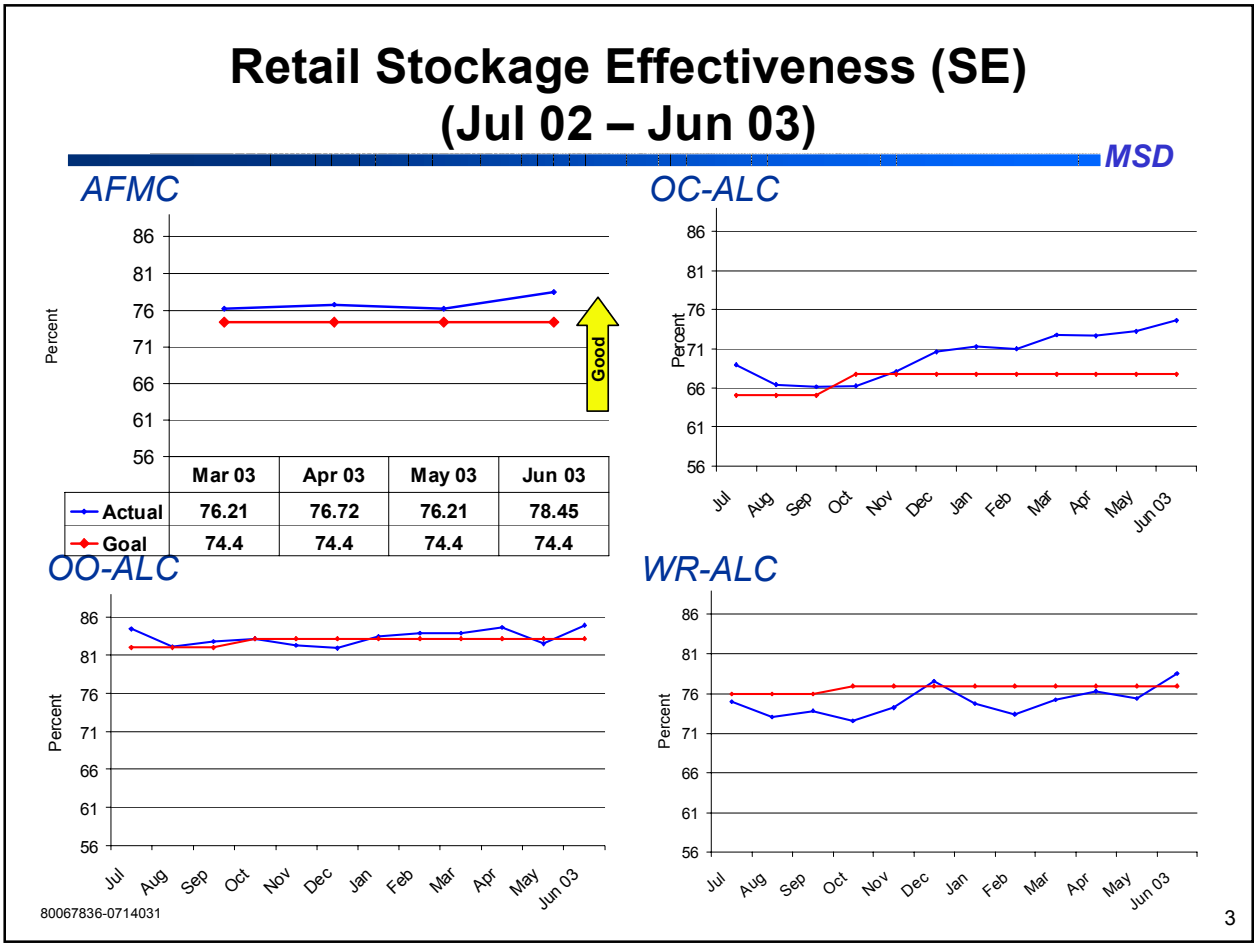


Figure 19: Retail Stockage Effectiveness Trend Analysis

Analysis: *While monthly reporting of this metric is not required by AFMC, some organizations may desire to continue the review and analysis of this metric.* Figure 20 is an example of a retail SE analysis chart. SE analysis can be made using these charts as a starting point. Analysis should be summarized with ample detail to explain trends, spikes, or dips reflected by the data. Analysis should include drill downs, which help isolate areas that are influencing trends, spikes, and dips. It should explain initiatives that are having a positive effect on trends, identify problems (e.g., constraints) that have adversely impacted the backorder trend and explain what led to the problem (e.g., poor planning of equipment needs or unplanned equipment failure). Also, explain actions that have been/are being taken, or planned to resolve support problems. Finally, where there are major drivers, such as specific NSNs, give examples, and furnish get-well dates.

Suggested Follow-on Analysis: Supply Chain Manager's Metric Tool (SCM_2T) (See Appendix 1, Section E)

Backorders (BO)

While this metric is traditionally a reported MSD metric, it does not correlate directly to Aircraft Availability and can drive the wrong behavior if used inappropriately.

OPR: AFMC/LGIP

OCR: AFMC/LGIA

Description: The AFMC Backorder metric measures the number of demands placed on the supply system that cannot be immediately satisfied from existing inventory – expressed as either units or requisitions in a snapshot view (2nd day of each month).

Calculation Formula:

$$BO = \sum (Open\_Backorder\_Units)$$

Data Source: The Backorder Analysis and Reporting Tool (BART) is the authorized source for AFMC Backorder reporting. Business rules are applied to the monthly D035A (Item Manager Wholesale Requisition Process) data file to convert the file into the BART. EDW will soon become the authorized source for Backorder data. The BART filter can be applied to apply the same filters as the BART tool

EDW, BART and the BART Users' Guide can be accessed through the Supply Chain Management Tool Box at **https://scm.wpafb.af.mil/**.

Business Rules: D035A data is filtered to include only Budget Code 8 transactions (to reflect MSD related items).

- Transactions with invalid priority codes are filtered (not between 1-15 or null).
- Supply Chain Managers (SCMs) are associated with transactions by a pseudo-code reference that is updated monthly from the 1st character of the Manager Designator Code (MDC) in a monthly D043 data feed.
- MAJCOMs are linked to transactions by the Stock Record Account Number (SRAN) via a cross-walk table supplied by D043.
- EDW includes all transactions. When the BART filter is applied in EDW, queries provide data consistent with these business rules.

Performance Targets: Process indicators facilitate root-cause analysis and add additional meaning to performance measures. They are not considered performance measures and are not formally monitored against set targets. Internal targets may be set by organizations seeking to improve specific problem items or areas that have been identified to be affecting a performance measure like Aircraft Availability.

Analysis: *While monthly reporting of this metric is not required by AFMC, some organizations may desire to continue the review and analysis of this metric.* The Spares Priority Release Sequence (SPRS) provides an effective method of stratifying backorders for analysis. SPRS categorizes backorders according to their impact on warfighter readiness not just the

requisition's priority. (See Appendix 4 for more information on how SPRS priority is determined). Analysis of SPRS backorders will focus in on those backorders that may provide high readiness payback.

Analysis of SPRS or all backorders should be summarized with ample detail to explain trends, spikes, or dips reflected by the data. Analysis should include drill downs, which help isolate areas that are influencing trends, spikes, and dips. There are two primary ways to address causes of trends.

One explanation for trends is the identification of problems or improvements that have impacted the number of backorder units. There are four primary elements that need to be reported for this type of explanation.

- Identify the problem(s) (e.g., shop constraint by shop or higher level) or improvements (e.g., increased production by shop or higher level) that have impacted the trend.
- Explain the cause(s) of the problem(s) (e.g., poor planning of equipment needs or unplanned equipment failure) or improvement(s) (e.g., new or repaired test equipment).
- Discuss actions that have been/are being taken, or planned to resolve support problems (applies only to negative trend).
- Provide get-well dates (applies only to negative trend).

Another explanation for trends is item specific; activity related to one or more specific items that has impacted the backorders quantities. There are three primary elements that need to be reported for this type of explanation.

- Identify the item(s) (NSN, nomenclature, applicable end item)
- Explain action pertaining to the item(s) that degraded trend (e.g., change from budget code M to 8 for items with large backorder quantities) or improved trend (e.g., filled very large quantity backorders).
- Provide item backorder get-well dates (applies only to negative trend).

Avoid explaining trends by simply identifying top driver NSNs. Often, they represent various problems, but not necessarily the problem(s) that caused the trend. They indeed may have been large backorder quantity contributors, but they may have been for months, even when total backorder quantities were low.

Suggested Follow-on Analysis: EDW (See Appendix 1, Section A) and BART (See Appendix 1, Section B)

Logistics Response Time (LRT)

While this metric is traditionally a reported MSD metric, it does not correlate directly to Aircraft Availability and can drive the wrong behavior if used inappropriately.

OPR: AFMC/LGIP

OCR: AFLMA

Description: LRT measures the average time it takes to satisfy a base supply or depot retail backorder, or demand that could not be satisfied immediately by existing inventory.

While the definition of LRT may sound like that of Customer Wait Time (CWT), it differs in several significant ways:

- LRT does not include measurement of time from the initiation of the customer order until it is placed on backorder
- LRT does not include measurement of time between item receipt at retail supply (base supply) and delivery to the warfighter (flight line)
- CWT is the congressionally mandated pipeline metric (and is intended to replace LRT)
- CWT is reported by MAJCOMs as well as AFMC (LRT is not reported by MAJCOMs).

AFMC-LRT numbers represent all contract, organic, and multiple sources of repair. Contract vs. organic repair LRT (for CREP) shall utilize the same business rules as AFMC-LRT. Contract Repair Enforcement Program (CREP) reports are simply a peel-back of AFMC-LRT.

Calculation Formula:

$$LRT_{Days} = (RECEIPT\_DATE)_{Base/Depot} - (REQUISITION\_SERIAL\_DATE)_{Base/Depot}$$

Data Source: The Logistics Response Time Analysis and Reporting Tool (LART) is the official source for LRT reporting.

Business rules are applied to the monthly D165B data file and the Logistics Metric Analysis Reporting System (LMARS) file to create LART.

LART and the LART Users' Guide can be accessed through the Supply Chain Management Tool Box at **https://scm.wpafb.af.mil/**.

Business Rules: The following business rules are applied to display the LRT data used in reporting. See Appendix 2 for business rules impact on data.

If a requisition is missing either the customer receipt date or the serial date, the record is filtered.

All stock numbers are cross-referenced by NIIN.

Transactions without a valid priority (1-15 are valid) are filtered.

Only transactions with Air Force Routing Identifier Codes (RICs) are included.

Transaction segments are as follows:

- Segment 01: Base Requisition
- Segment 02: ICP (Inventory Control Point) Process
- Segment 03: DLA (Defense Logistics Agency) Process
- Segment 04: Transit Time

Closed requisitions with missing segment date(s) are scrubbed as follows:

- If date(s) is missing for some segment(s) and the date fields before and after are equal, then the missing date is set to the same value. If the 02 end date is missing and the 01 end date is not equal to the 03 end date, then the following rules apply:
    - If one day between 01 end and 03 end, then 02 = 0 and 03 = 1
    - If two days between 01 end and 03 end, then 02 = 1 and 03 = 1
    - If more than two days between 01 end and0O3 end, then 03 = 2 and 02 = balance
- If the 03 segment end date is missing, then the following rules apply:
    - If one day between 02 end and 04 end, 03 = 0 and 04 = 1
    - If two days between 02 end and 04 end, 03 = 1 and 04 = 1
    - If three days between 02 end and 04 end, 03 = 1 and 04 = 2
    - If four days or more between 02 end and 04 end, 03 = 2 and 04 = balance

Any record that has a negative value for any segment or is missing more than one segment after the above scrub will be included in the LMARS table but will be excluded from all computations and reports.

The data is scrubbed for duplicate transactions based on the document number (for records without a suffix) and duplicates are removed.

Source of Supply (SOS) is assigned from D043 (SOS is used to identify the depot and to extract the requisitions from the Defense Automatic Addressing System (DAAS)). Any records that do not have a value in the Depot (SOS) field within the Access Database will be filtered.

Only closed requisitions which have all segments completed are included in LRT. Open requisitions are analyzed under the Backorder metric.

Only MSD (budget code 8) items are included in LRT reporting (as assigned in D043). Non-MSD items that meet other filter criteria will be contained in the LMARS table but will not be included in any computations or reports.

Only ERRC N, P (Consumable) and C, L, T (Reparable) items are included.

Historical data remains static with no updates (if file maintenance is conducted, historical LRT figures remain unchanged).

LRT is calculated by subtracting the Customer Receipt date from the Requisition Serial date and is expressed in whole days.

Performance Targets: Process indicators facilitate root-cause analysis and add additional meaning to performance measures. They are not considered performance measures and are not formally monitored against set targets. Internal targets may be set by organizations seeking to improve specific problem items or areas that have been identified to be affecting a performance measure like Aircraft Availability.

Analysis: *While monthly reporting of this metric is not required by AFMC, some organizations may desire to continue the review and analysis of this metric.* Explain whether short LRT is a function of good things happening or a problem. Is it getting shorter because we are doing a better job (e.g., filling more backorders quickly), or because we are struggling in some area (e.g., filling few demands quickly, but even fewer old demands)? The following should be reported:

- Identify the problem(s) (e.g., shop constraint by shop or higher level, if applicable) or improvements (e.g., increased production by shop) that impacted the trend.
- Explain the cause(s) of the problem(s) (e.g., poor planning of equipment needs or unplanned equipment failure) or improvement(s) (e.g., new or repaired test equipment).
- Discuss actions that have been/are being taken, or planned to resolve support problems (applies only to negative trend).
- Provide get-well dates (applies only to negative trend).

Explain whether long LRT is a function of a problem or good things happening. Is it getting longer because we are struggling in some area (e.g., fewer backorders are being filled quickly, causing overall age of backorders to increase), or we are doing a better job (e.g., consistently filling new backorders, while filling even more old backorders)? The following should be reported:

- Identify the problem(s) (e.g., shop constraint by shop or higher level, if applicable) or improvements (e.g., increased production by shop or higher level) that impacted the trend.
- Explain the cause(s) of the problem(s) (e.g., poor planning of equipment needs or unplanned equipment failure) or improvement(s) (e.g., new or repaired test equipment).
- Discuss actions that have been/are being taken, or planned to resolve support problems (applies only to negative trend).
- Provide get-well dates (applies only to negative trend).

Avoid explaining trends by identifying top driver NSNs. Often, they represent various problems, but not necessarily the problem(s) that caused the trend. They indeed may have significantly contributed to long LRT, but they may have been for months, even when LRT was short.

Section C – Measurement Packages

The American Production and Inventory Control Society (APICS) advises organizations to focus on five (+/- 2) metrics to avoid metric-overload. AFMC recognizes the administrative and managerial burden related with reporting too many metrics. Moreover, some metrics are more important than others depending on the organizational focus within the supply chain. Measurement Packages provide a recommended set of primary metrics by position in the supply chain. The recommended metrics provide the most relevant performance measures and process indicators for a position in the supply chain.

Supply Chain Perspective	Most Relevant Metrics
Item Manager	**MICAP Hours** **CWT** MICAP Incidents TRV TRV
Supply Chain Manager (SCM)	**MICAP Hours** **CWT** Backorders MICAP Incidents
Weapon System Supply Chain Manager (WSSCM)	**Aircraft Availability** **MICAP Hours** **CWT** MICAP Incidents TRV *(Requires WS-NIIN relationship)
ALC	**Aircraft Availability** **MICAP Hours** **CWT** **NOR** MICAP Incidents TRV
AFMC	**Aircraft Availability** **MICAP Hours** **CWT** **NOR** MICAP Incidents TRV
Air Staff	**Aircraft Availability** **MICAP Hours** **CWT** **NOR**
MAJCOM	**Aircraft Availability** **MICAP Hours** **CWT**

Bold font indicates Performance Measures. Non-Bold font indicates Process Indicators.

Section D – Terms

Actual Due Out (ADO)……..	An Air Force retail backorder that is a MICAP, Awaiting Parts, Delayed Discrepancy or Due Out to Maintenance backorder (not including stock or kit replenishment).
Accumulated Operating Result (AOR)……..	The combined results of prior year's performances with respect to profit and losses.
Aircraft Availability (AA)…….	Percentage of the time an aircraft is not unavailable due to supply – expressed as 1 minus the Total Non Mission Capable Supply Time.
Awaiting Parts (AWP)……	An item shortage caused by an assembly delayed in maintenance due to a component or sub-assembly shortage.
Backorders (BO)……	The sum of the demand quantity (in units) placed on the supply system that cannot be immediately satisfied from existing inventory (including stock replenishment).
Backorder Analysis and Reporting Tool (BART)……..	The Backorder Analysis & Reporting Tool (BART) (see links for web location) provides point-in-time, 12 month trend, and Top 10/20 reports and charts of D035A data for Materiel Support Division (MSD) items.
Cannibalization……...	The removal of a functional part from one weapon system to fill a demand on another.
Contract Repair Enforcement Program (CREP)……	An acquisition reform program that responds directly to customer demands while simultaneously reducing inventory, process steps, queue time and total system operating costs.
Customer Wait Time (CWT)….	A pipeline measurement of customer due-outs (not including stock replenishment and kit fills) expressed in days measuring the average time between issuance of a warfighter order and receipt.
D035A - Item Manager Wholesale Requisition Process (IMWRP)……..	Part of the D035 Stock Control System focused on worldwide property accounting, inventory control, and distribution/redistribution of material at the wholesale level – cataloging and management data for all stock items managed, used or stored at the Air Logistics Centers.
D035E – Readiness Based Leveling (RBL)……	Allocates levels on a quarterly basis based on the D200 global requirement.
D043 – Master Item Identification Database (MIIDB)……..	Air Force supply system that validates, records, and maintains data pertinent to Item Identification, Catalog Management, and other supply management courses.
D165B – AV & Selected Items of Equipment MICAP & AWP Reporting system……	Automatic data processing (ADP) system maintained at Tinker AFB that collects, maintains, and disseminates worldwide MICAP and AWP (Awaiting Parts) data.
D200 – Requirements Management System (RMS)…	ADP system that automates and integrates the Air Force materiel requirements determination processes which compute procurement and repair requirements for spares, repair parts, and major equipment items.
Delayed Discrepancy……	The failure of an item on aircraft that does not require immediate replacement to allow the aircraft to continue to safely perform at least one of its assigned peacetime or wartime missions.
Direct Reimbursable Expenses	Expenses that are incurred and are reimbursed for through a direct appropriation not through the sale of assets to make up for our expense.

Direct Reimbursable Revenue	Actual reimbursement for the Direct Reimbursable Expenses.
Enterprise Data Warehouse (EDW) – Q310……	A collection of cross-functional, transaction-level detail records encompassing the analytical data that the USAF needs to support the warfighter.
Expected Backorder……..	A RBL-forecasted retail, Air Force backorder that is a MICAP, Awaiting Part, Delayed Discrepancy, or Due out to Maintenance backorder.
Expendability, Recoverability, Reparability, Category (ERRC) Code……..	Either a single digit or three-digit supply oriented code used to classify AF items of supply into various categories for management purposes (See AFMAN 23-110, part 4, chapter 1, attachment 1A-27, contains the authorized codes and their explanations).
EXPRESS Supportability Summary……..	An analytical tool, EXPRESS provides an additional method for conducting root cause constraints analysis of MICAP data. This tool summarizes the constraints that have inhibited the successful delivery of parts to the customer.
High Impact Target (HIT) Program……	The HIT program is part of the Air Force Readiness Drivers Program (AFRDP) and provides a method for further analysis in identifying constraints affecting aircraft availability. This data is collected and reviewable at the NIIN and aggregated levels. MAJCOMs identify items that are imposing an immediate, acute impact upon forces engaged or about to be deployed in contingency operations.
Issue Effectiveness (IE)…….	A measure of a supply accounts ability to satisfy any customer demand (issue item off-the-shelf vs. backordering item).
Issue Effectiveness/ Stockage Effectiveness (IE/SE) Tool……	A tool that allows drill-down capability to track and analyze monthly IE/SE data down to the NSN and SCM level for root cause identification and corrective action. The AFLMA established the required protocols and reporting programs to allow the required NSN-level IE data for SMAG-managed items to be extracted directly from SBSS.
Journal Variance (JV)……	Miscellaneous Account Ledger used to record expenses and revenues that are not adequately captured in other accounts. For example, a journal variance would be used to balance the inventory write off due to damages from the collapse of a warehouse roof.
Lateral support……	The process of satisfying demand for an item through another base instead of receiving a part from the source of supply.
Logistics Response Time (LRT)……	A pipeline measurement of warfighter and base/depot retail requisitions expressed in days measuring the average time between issuance of a warfighter/base/depot retail order and receipt at base/depot supply
Logistics Response Time Analysis and Reporting Tool (LART)……..	The Logistics Response Time Analysis & Reporting Tool (LART) provides point-in-time, 12 month trend, and Top 25 Longest reports of LRT data and bar charts for Material Support Division (MSD) items.
Non-Project Coded Kit Issues	The process of satisfying demand for an item by issuing parts from Readiness Spares Packages or Mission Support Kits not in support of a valid project code instead of through the normal replenishment process. Units sometimes use readiness spares packages as an extension of the warehouse to fill demands (which can create a risk to readiness).
Net Operating Result (NOR)….	Financial measurement showing the difference between revenue and expenses or a bottom line profit and loss indicator.

MICAP Analysis and Reporting Tool (MART)……	The MICAP Analysis & Reporting Tool (MART) provides point-in-time, 13 month trend, and Top 25 (Hours and Incidents) reports and charts of D165B MICAP data for Material Support Division (MSD) items.
MICAP Hours……..	Measurement of the hours accrued in a given month for items affecting mission capability that are on backorder.
MICAP Incidents…….	Measurement of the number of incidents based on the number of MICAP requisitions accumulated.
Mission Capability……..	The percentage of all possessed aircraft that are capable of performing at least one of their assigned peacetime or wartime missions.
Performance Measure……...	Data that indicates the strengths and opportunities for improvement in an organization. These measures can highlight organizational effectiveness, customer satisfaction, and the cost-effective use of resources and facilities. Performance measures are reported externally and show the most direct link to organizational goals and customer value.
Process Indicator……	Data that provides information about or contributes to the understanding of a process. Process indicators are used in root cause analysis of deviations in performance measures. Typically, process indicators are not directly related to overall organizational goals and are used for internal reporting.
Readiness Based Leveling (RBL)……	See definition for D035E.
Reliability and Maintainability Information System (REMIS) – G099……	An Air Force system that receives selected weapons system maintenance information from the G054 Core Automated Maintenance System (CAMS), G081 Malfunction Detection, Analysis & Recording System (MDARS), G105 Integrated Maintenance Data System (IMDS), and depot and contractor technology repair centers for inventory, status and utilization; maintenance data documentation (MDD) on all reportable types of equipment, actual and approved configuration data, time change and inspection data, and time compliance technical order data.
Standard Base Supply System (SBSS) – D002A…….	A computerized system to account for supplies and equipment at the base level. With the SBSS, personnel can track every item in the Supply System through standardized programs and procedures.
SCM toolbox……	A collection of analytical tools to facilitate analysis and management of supply chain performance. Each tool can be accessed through the SCM Web Page, located at **https://scm.wpafb.af.mil/**.
SMART (System Management Analysis & Reporting Tool)…..	An Air Force database that allows for detailed analysis of individual NSNs. Data includes requisition objective levels, quarterly demand rates, serviceable and unserviceable world-wide inventory, backorder break downs and current production and constraint information.
Spares Priority Release Sequence (SPRS)……..	Prioritization matrix established by the Board of Advisors (BOA) to give an operational slant to the Express (D087X) Aircraft Availability repair prioritization schema. Applied by supply analysts to backorder data to achieve “tip of the spear”, operationally-focused backorder analysis.
Stockage Effectiveness (SE)…	Measure of a supply account’s ability to satisfy customer demand for authorized stockage items.

Supply Management Activity Group (SMAG)……	The SMAG is composed of multiple working capital funds. The AFMC managed elements of SMAG are the two Air Force Working Capital Fund Activity Groups: the Materiel Support Division and the General Support Division.
Total Non Mission Capable Supply Time (TNMCS)……..	The percentage of time a weapon system cannot fly any of its assigned missions because of conditions attributed to supply or both supply and maintenance.
Total Requirements Variance (TRV)……	Evaluation of Expected Backorders (RBL forecasted customer due-outs) vs. actual due outs (with option to view masked due-outs caused by laterals and non-project coded kit issues).
Weapons System Supply Chain Managers (WS SCM)….	The single point of focus for the SPD for seamless end-to-end supply chain support of the weapon system. Their overarching mission is to meet corporate Air Force weapon system availability targets at a reduced cost.

Section E – Links

Backorder Analysis and Reporting Tool (BART)……..	https://scm.wpafb.af.mil/
WSMIS-SAV/Pipeline Performance and Analysis System (PPAS) Customer Wait Time Tool……	http://www.wsmis.day.disa.mil/
D035A…….	https://www.scsweb.day.disa.mil/smsweb/index.html
D035E (RBL)……..	https://www.afmc-mil.wpafb.af.mil/HQ-AFMC/LG/lgi-page/D035/aboute.htm
Enterprise Data Warehouse (EDW)	https://edw.day.disa.mil
EXPRESS Supportability Summary	https://www.express.day.disa.mil/default.asp?extpage=0&currpage=home.asp
WSMIS/SAV HIT Program.....	http://www.wsmis.day.disa.mil/
Issue Effectiveness/Stockage Effectiveness (IE/SE) Tool……...	https://132.60.203.44/IESE/WDBCGI.EXE/iese_web/iese_web.home
Logistics Response Time Analysis and Reporting Tool (LART)…….	https://scm.wpafb.af.mil/
MERLIN……..	https://www.merlin.drc.com/Menu/LogOn.asp
MICAP Analysis and Reporting Tool (MART)……..	https://scm.wpafb.af.mil/
SBSS……..	https://web2.ssg.gunter.af.mil/supply/ilsw/rel1/ILS-S%20Links.htm
SMART (System Management Analysis & Reporting Tool)……..	https://scm.wpafb.af.mil/
REMIS…….	https://remis.wpafb.af.mil

Appendix 1 – Tools

Section A – Enterprise Data Warehouse (EDW)

The Enterprise Data Warehouse (EDW) is the official Air Force data warehouse that provides a consolidated source of cross-functional data through web-browser interface. EDW provides users the capability to view very current data in dashboard format, pre-built reports or with ad-hoc queries for maintenance, supply and financial data.

Access can be requested from the EDW logon screen at **https://edw.day.disa.mil.** EDW training is also available. For more information contact Ms. Lisa Darnell of the EDW Training Team at 937.258.4774 or via email at **ldarnell@bearingpoint.net**.

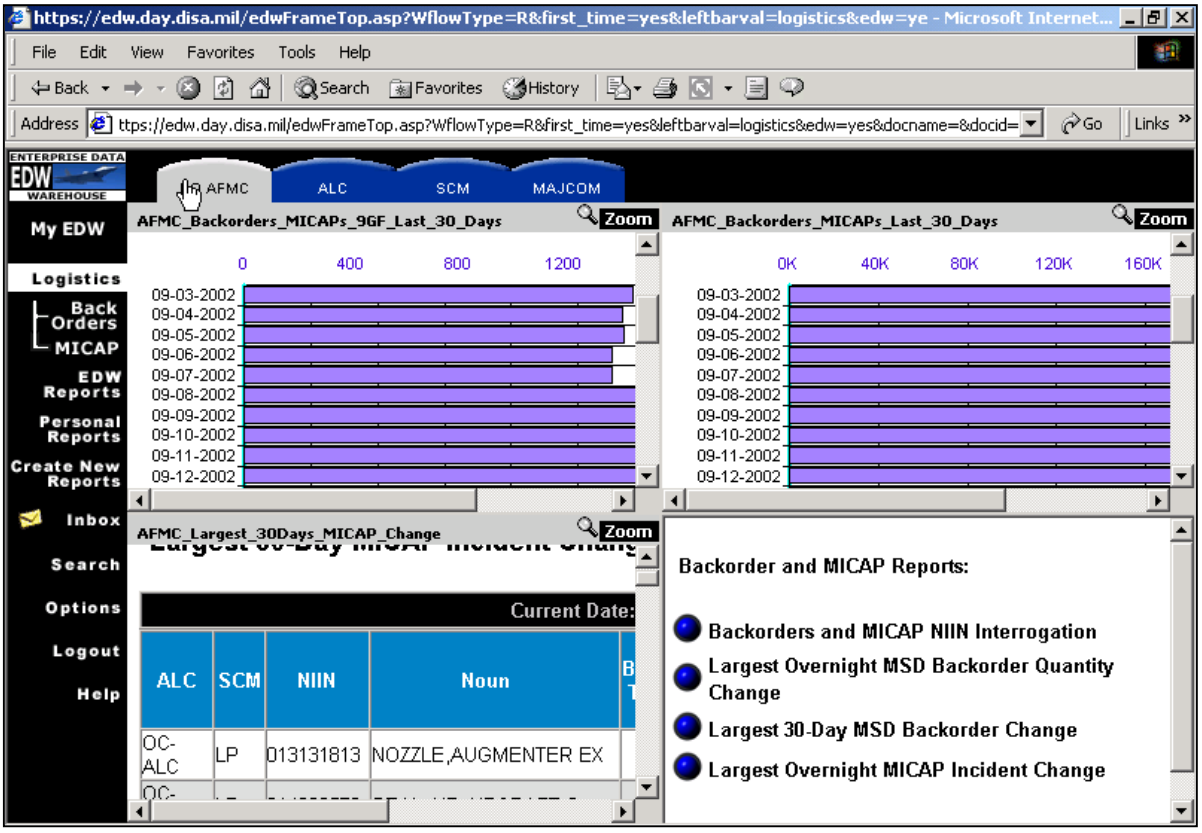


Figure 20: EDW Logistics Report Screen

Section B – Analysis and Reporting Tools

BART

The Backorder Analysis & Reporting Tool (BART) provides point-in-time, 12 month trend, and Top 10/20 reports and charts of D035A data for Materiel Support Division (MSD) items. The tool is divided into four sections: Backorders, Awaiting Parts (AWP), Mission Capable (MICAP), and Readiness Spares Package (RSP). It provides data from HQ AFMC, ALC, SCM and MAJCOM perspectives. Additional charts include a 12 Month bar chart (HQ AFMC and ALC perspective) for each ALC and the ability for the user to view a series of 2D and 3D charts from the ALC perspective. The tool is updated monthly using D035A data. BART is available in MS Access 2000 and located on the SCM website, (**https://scm.wpafb.af.mil/**).

LART

The Logistics Response Time Analysis & Reporting Tool (LART) provides point-in-time, 12 month trend, and Top 25 Longest reports of LRT data and bar charts for Material Support Division (MSD) items. The tool is divided into two sections: all LRT and MICAP LRT. It provides LRT data from HQ AFMC, ALC, SCM, MAJCOM and Weapon System perspectives. The tool is updated monthly with LMARS LRT data. LART is available in MS Access 2000 and located on the SCM website, (**https://scm.wpafb.af.mil/**).

MART

The MICAP Analysis & Reporting Tool (MART) provides point-in-time, 13 month trend, and Top 25 (Hours and Incidents) reports and charts of D165B MICAP data for Material Support Division (MSD) items. The tool is divided into two sections, Non-NIMSC5 (Non-consumable Item Materiel Support Code) AF SICA items and AF SICA NIMSC5 items and provides MICAP hours and incidents from HQ AFMC, ALC, SCM, MAJCOM, and Weapon System perspectives. Additional reports feature breakouts by cause code, condition code, open and closed MICAP Hours, and Top 25 NSNs. MART is available in MS Access 2000 and located on the SCM website, (**https://scm.wpafb.af.mil/**).

Section C – High Impact Target (HIT) Program

High Impact Target (HIT) Incidents from the Air Force Readiness Drivers Program (AFRDP) provide a method for further analysis in identifying constraints affecting aircraft availability. MAJCOMs identify items to the HIT program that are imposing an immediate, acute impact upon forces engaged or about to be deployed in contingency operations. ALC supply chain managers (SCM) then provide an initial constraint analysis and recovery plan for each item and then update the item every two weeks or as the constraint status/resolution plan changes. This data is collected and reviewable at the NIIN and aggregated levels. Analysis of this data will reveal the current underlying constraint for each item as well as the most recent plan to relieve the constraint. Analysis of the aggregate data will reveal which constraint grouping is having the greatest impact on readiness.

The official source of HIT data is SAV, available on the WSMIS web site **http://www.wsmis.day.disa.mil/**. Numerous queries and reports are available on the site that allow for easy analysis of constraints at the aggregate or NSN level.

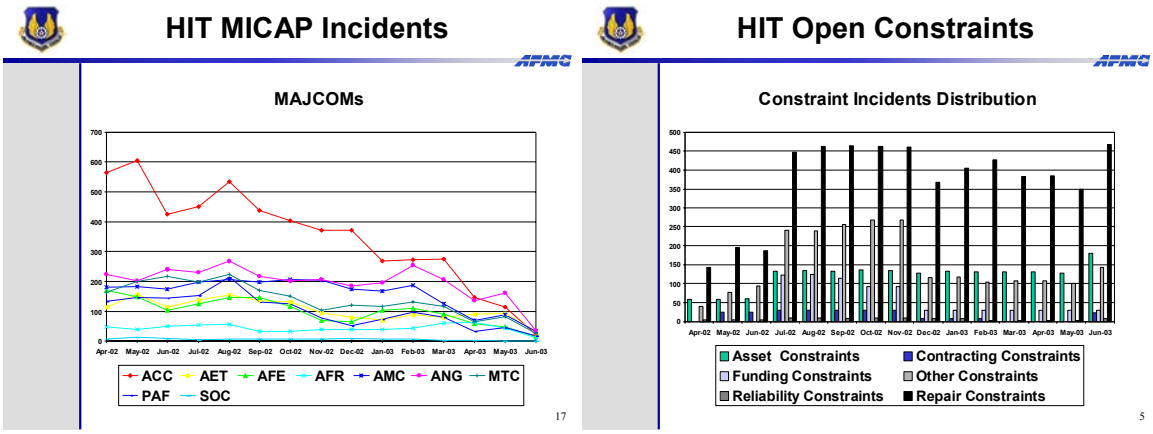


Figure 21: Aggregate HIT Constraint Reports

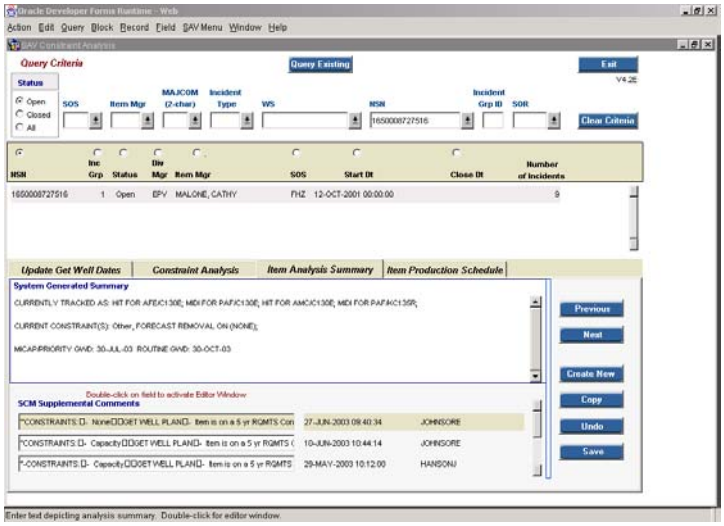


Figure 22: NSN level HIT Constraint Analysis Screen

Section D – EXPRESS Supportability Summary

The EXPRESS Supportability Summary provides an additional method for conducting root cause constraints analysis of MICAP data. This tool summarizes the constraints that have inhibited the successful delivery of parts to the customer. Figure 21 shows carcass shortages to have the greatest number of failures for the day of 7/15/2003.

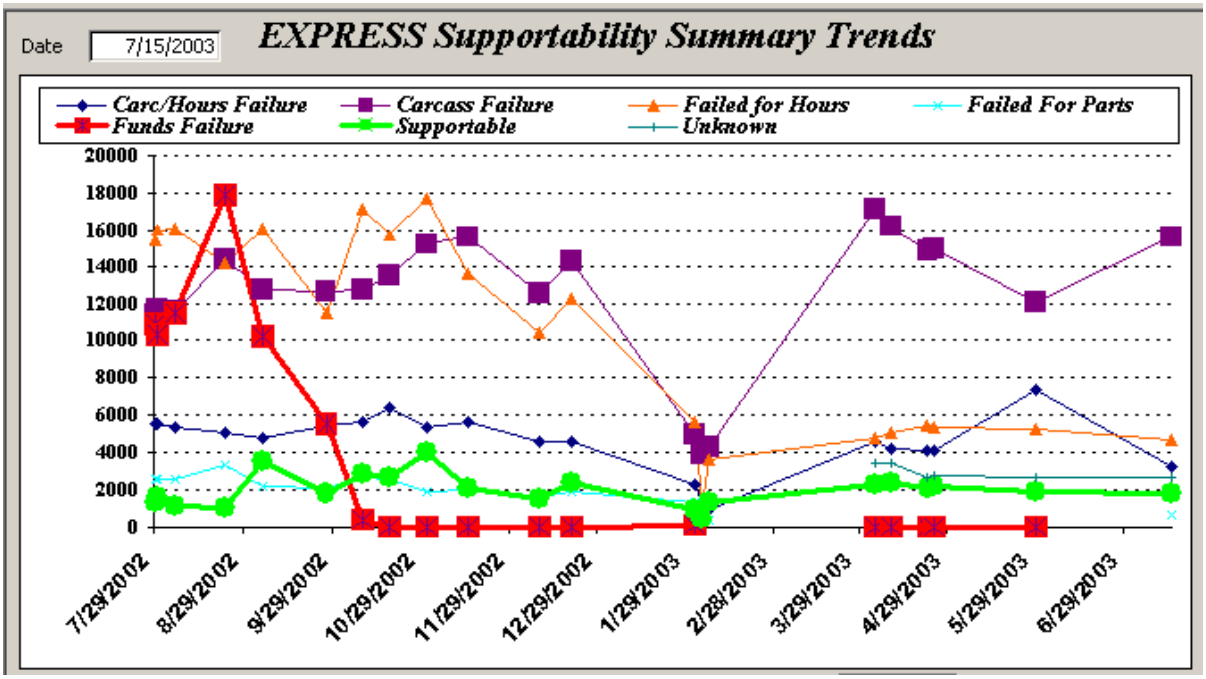


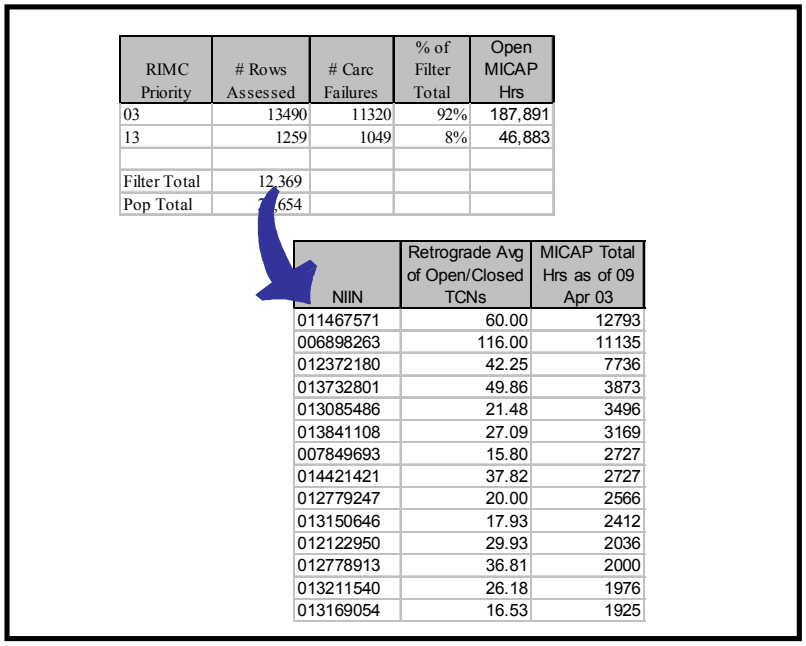
Figure 23: EXPRESS Supportability Summary Trends Screen

These are the symptoms of bigger issues...

- What was the funding vs. requirement? Are we executing the buy program on schedule?
- Is transportation expediting critical spares that are “carcass short”?
- What was the flying hour program vs. executed?
- What is the level of bit n’ piece support from DLA?
- Was capacity (labor hours, test station throughput, etc) correctly sized to the requirement?

Aggregate figures can be better understood by drilling-down to granular detail.

Further analysis incorporating NIIN level MICAP hours reveals the assets accounting for the majority of the problem. These highest-ranking assets would provide the greatest return on AA. Note that not all carcass-constrained items cause MICAP hours. The focus needs to be placed on those that do.



RIMC Priority	# Rows Assessed	# Carc Failures	% of Filter Total	Open MICAP Hrs
03	13490	11320	92%	187,891
13	1259	1049	8%	46,883
Filter Total	12,369			
Pop Total	[illegible]654			

NIIN	Retrograde Avg of Open/Closed TCNs	MICAP Total Hrs as of 09 Apr 03
011467571	60.00	12793
006898263	116.00	11135
012372180	42.25	7736
013732801	49.86	3873
013085486	21.48	3496
013841108	27.09	3169
007849693	15.80	2727
014421421	37.82	2727
012779247	20.00	2566
013150646	17.93	2412
012122950	29.93	2036
012778913	36.81	2000
013211540	26.18	1976
013169054	16.53	1925

Figure 24: Example drill down analysis from carcass failures to the NIIN level ranked by MICAP Hours

Section E – Supply Chain Manager's Metric Tool (SCM^{2}T)

The Supply Chain Manager's Metric Tool allows the user to model the key logistics performance metrics such as Logistics Response Time (LRT), retail Issue Effectiveness (IE), Stockage Effectiveness (SE), wholesale Backorders (BO), Customer Wait Time (CWT), and MICAP Hours based on selected criteria. The criteria includes MAJCOM, Weapon System, Supply Chain Manager Organization, Source of Supply, Source of Repair, Shop (Production Section Schedule Designator [PSSD]), Manager Designator Code and NSN. The user opens the Microsoft Access application and begins to enter the filter criteria as demonstrated below:

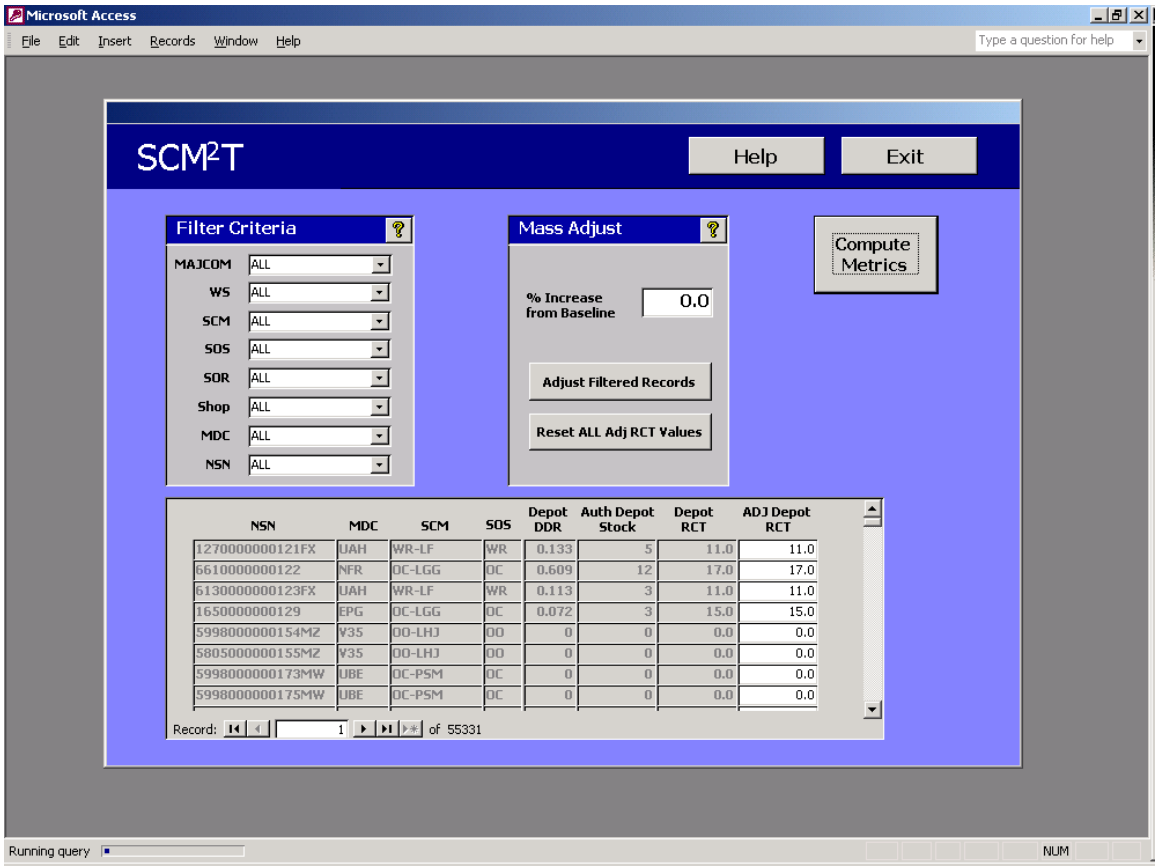


Figure 25: Supply Chain Manager's Metrics Tool Initial Screen

The user then modifies the Mass Adjust box to change the depot repair cycle time for the filtered records in the spreadsheet view as well. This adjustment is a percentage increase from the baseline depot repair cycle time. The Compute Metrics button is clicked to compute the target metric values, based on the filter criteria entered above. This allows the user to analyze IE/SE data at the NIIN level.

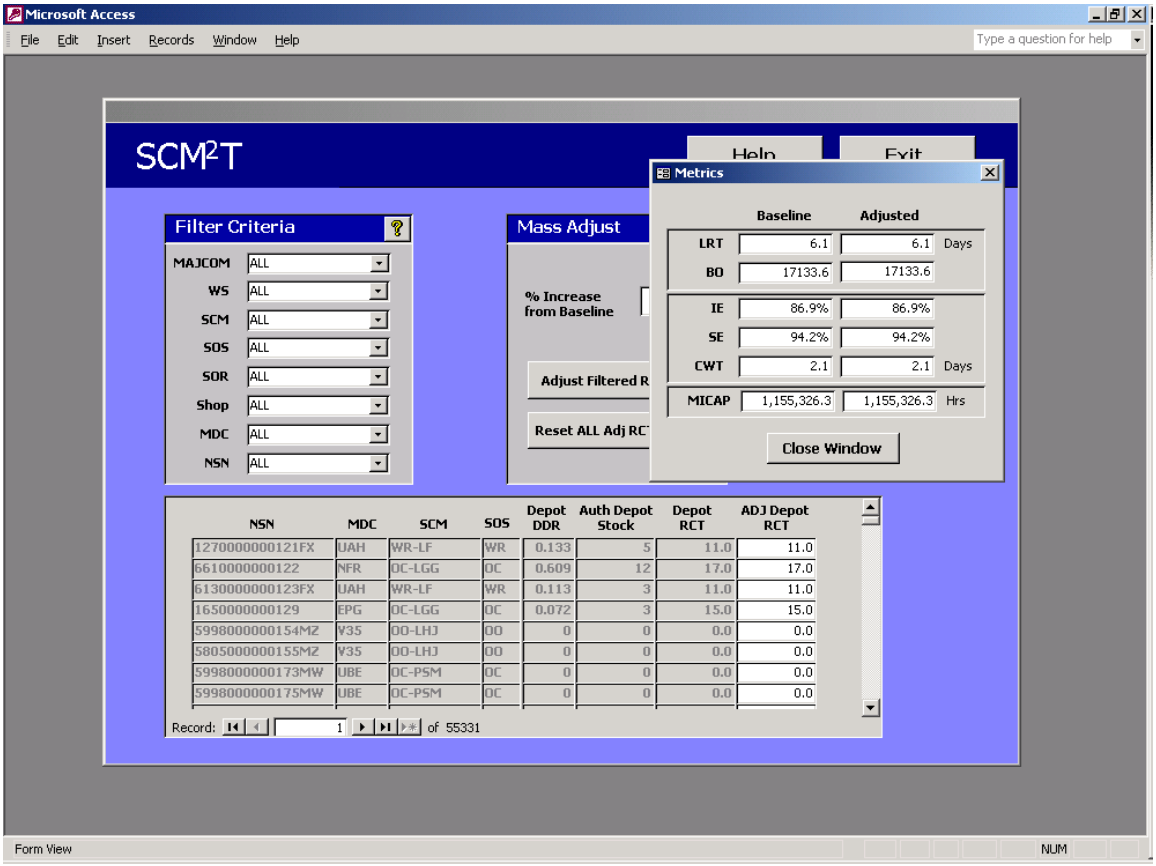
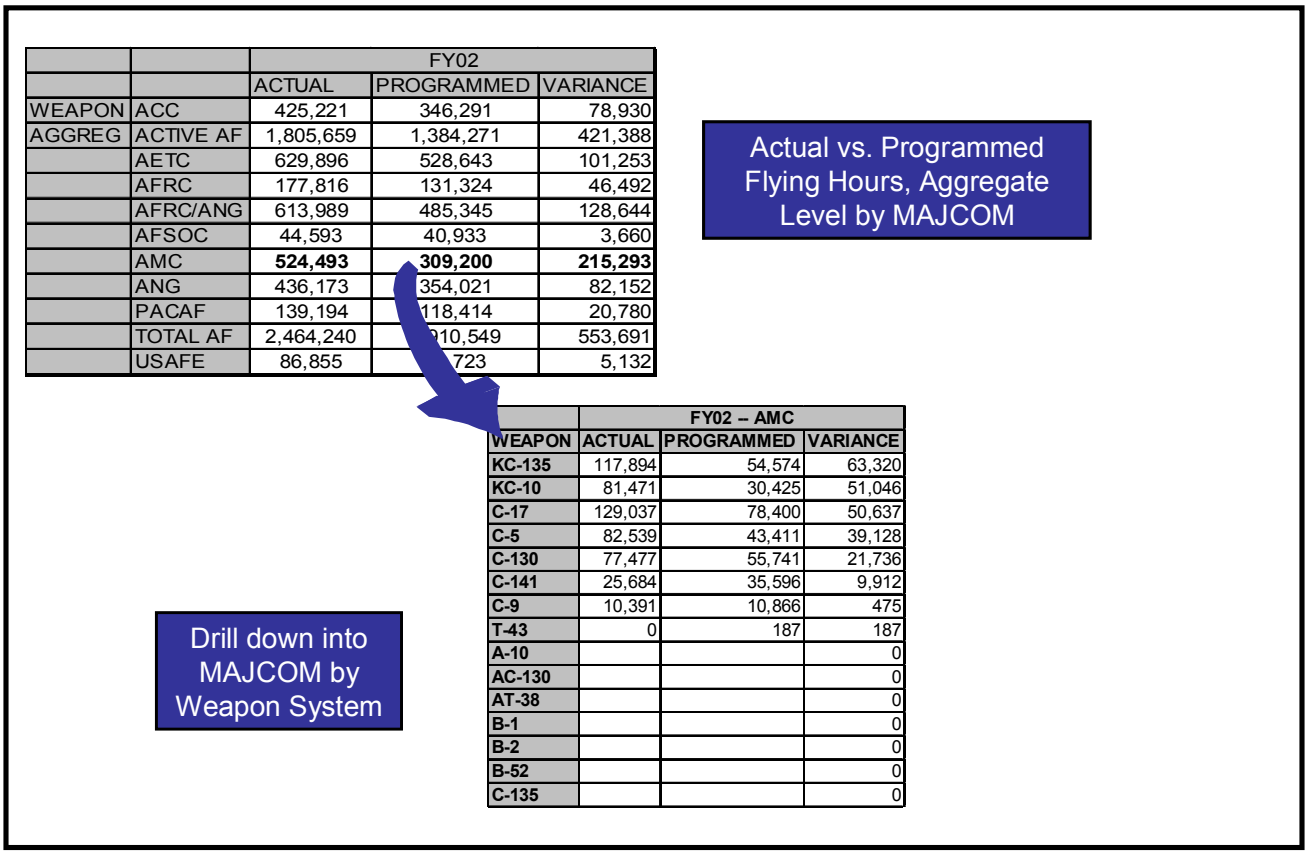


Figure 26: Supply Chain Manager's Metrics Tool Compute Metrics Screen

Appendix 2 – Flying Hour Variance

Users may access MERLIN to conduct follow-on metric analysis on Flying Hour Variance by MAJCOM and Weapon System. This secured website allows the user to download actual vs. programmed Flying Hours on an aggregate level as well as for a specific MAJCOM and Weapon System. See Figure 25 below:



		FY02		
		ACTUAL	PROGRAMMED	VARIANCE
WEAPON	ACC	425,221	346,291	78,930
AGGREG	ACTIVE AF	1,805,659	1,384,271	421,388
	AETC	629,896	528,643	101,253
	AFRC	177,816	131,324	46,492
	AFRC/ANG	613,989	485,345	128,644
	AFSOC	44,593	40,933	3,660
	AMC	**524,493**	**309,200**	**215,293**
	ANG	436,173	354,021	82,152
	PACAF	139,194	118,414	20,780
	TOTAL AF	2,464,240	910,549	553,691
	USAFE	86,855	723	5,132

	FY02 – AMC		
WEAPON	ACTUAL	PROGRAMMED	VARIANCE
KC-135	117,894	54,574	63,320
KC-10	81,471	30,425	51,046
C-17	129,037	78,400	50,637
C-5	82,539	43,411	39,128
C-130	77,477	55,741	21,736
C-141	25,684	35,596	9,912
C-9	10,391	10,866	475
T-43	0	187	187
A-10			0
AC-130			0
AT-38			0
B-1			0
B-2			0
B-52			0
C-135			0

Figure 27: Flying Hour Variance Analysis

Appendix 3 – Business Rules Impact on

This appendix presents detail level about the impact of MICAP, Backorder and LRT AFMC business rule filters on the raw data. The data presented is from June 2002 data.

Impact of Business Rules on MICAP Hours:

- The following commodity codes are filtered: Commodity Code Q (Vehicles), R (Photographic), S (Cryptological), and V (Fire Fighter Vehicles). This reduces the total incidents by 2,086, and hours by 534,983.

- Only transactions with more than zero hours are reported. This rule reduces the total incidents by 7,089, but has no effect on the MICAP hours. The details of the impact of this filter are as follows:

    - Filters Deletion ("Termination" and "Deletion" are used interchangeably in AFMCI 23-110 - this document will use Deletion) Code 9 (Reported transaction in error) and Deletion Code B (Automatic termination of transaction after base failed to respond to 3 consecutive interrogations by the D165B) transactions that are 0-hour transactions. Deletion Code B and 9 transactions account for 2,176 of the 0-hour incidents filtered.

    - Filters Deletion Code 3 (satisfied through lateral support) transactions that are 0-hour transactions. Deletion Code 3 transactions account for 363 of the 0-hour incidents filtered. Note: Some Deletion Code 3 transactions are not 0-hour (like lateral transfers between bases) and are included in reporting (but incidents for Deletion Code 3, Advice Code L transactions are not counted).

    - Filters Deletion Code 6 (Received from Base Assets) or Deletion Code 7 (War Readiness Materiel (WRM) asset used to meet requirement) transactions that are mated with an advice code of W (WRM Asset used to preclude MICAP). D165B sets the MICAP hours to 0 for such transactions. Deletion Code 6/7 with Advice Code W account for 3,341 of the 0-hour incidents filtered.

- Only Budget Code 8 transactions MICAP hours and incidents are counted to focus the report on Materiel Support Division (MSD) items. This reduces incidents by 19,222, and hours by 10,679,922.

- The ALC field is used to link transactions to the appropriate ALC rather than the Source of Supply (SOS) field (D165B erroneously used the Routing Identifier as the SOS). This reduces the total incidents by 117, and hours by 15,840

	RULE	MICAP HOURS
	Beginning Balance	**14,381,692**
Exclusions	Commodity Code of Q, R, S, V exclusion	**534,983**
	Exclude transactions with MICAP Hours = 0	**0**
	Deletion Code = "B" or "9"	0
	Deletion Cod = "3"	0
	Deletion Code = "6" or "7" AND Advice Code = "W"	0
	OTHER	0
	Include only Budget Code = 8 MSD Items	**10,679,922**
	ALC fields contains a valid two-character code (i.e. OO, OC, WR, etc.)	**15,840**
	Ending Balance	**3,150,947**

Figure 28: Impact of Business Rules on MICAP Hours Reported

Impact of Business Rules on MICAP Incidents:

Filtering Commodity Codes Q (Vehicles), R (Photographic), S (Cryptological), and V (Fire Fighter Vehicles) reduced the total incidents by 2,086, and hours by 534,983.

Reporting only transactions with more than zero hours reduces the total incidents by 7,089, but has no effect on the MICAP hours. The details of the impact of this filter are as follows:

- Filtering Deletion Code 9 (Reported transaction in error) and Deletion Code B (Automatic termination of transaction after base failed to respond to 3 consecutive interrogations by the D165B) transactions that are 0-hour transactions reduced 0-hour incidents by 2,176.

- Filtering Deletion Code 3 (satisfied through lateral support) transactions that are 0-hour transactions reduced 0-hour incidents by 363. Note: Some Deletion Code 3 transactions are not 0-hour (like lateral transfers between bases) and are included in reporting (but incidents for Deletion Code 3, Advice Code L transactions are not counted).

- Filtering Deletion Code 6 (Received from Base Assets) or Deletion Code 7 (War Readiness Materiel (WRM) asset used to meet requirement) transactions that are mated with an advice code of W (WRM Asset used to preclude MICAP) reduced 0-hour incidents by 3,341.

Only Budget Code 8 transactions MICAP incidents are counted to focus the report on Materiel Support Division (MSD) items. This reduces incidents by 19,222, and hours by 10,679,922.

Filtering transactions with missing Air Logistics Center (ALC) information reduces the total incidents by 117, and hours by 15,840.

	RULE	MICAP INCIDENTS
	Beginning Balance	**45,000**
Exclusions	Commodity Code of Q, R, S, V exclusion	**2,086**
	Exclude transactions with MICAP Hours = 0	**7,089**
	Deletion Code = "B" or "9"	**2,133**
	Deletion Code = "3"	**357**
	Deletion Code = "6" or "7" AND Advice Code = "W"	**3,323**
	OTHER	**1,209**
	Include only Budget Code = 8 MSD Items	**19,222**
	ALC fields contains a valid two-character code (i.e. OO, OC, WR, etc.)	**117**
	Ending Balance	**16,486**

Figure 29: Impact of Business Rules on MICAP Incidents Reported

Impact of Business Rules on Backorders:

D035A data is filtered to include only Budget Code 8 transactions (to reflect MSD related items). The impact of this filter (utilizing June 2002 data as reference) was a reduction in requisition quantity by 42,952 and reduction in unit quantity by 358,780.

- Transactions with invalid priority codes are filtered (not between 1-15 or null). This did not impact any records in the June 2002 data.
- Supply Chain Managers (SCMs) are associated with transactions by a pseudo-code reference that is updated monthly from the 1st character of the Manager Designator Code (MDC) in a monthly D043 data feed.
- MAJCOMs are linked to transactions by the Stock Record Account Number (SRAN) via a cross-walk table supplied by D043.
- EDW includes all transactions. When the BART filter is applied in EDW, queries provide data consistent with these business rules.

RULE	Backorder Qty	Backorder Requisitions
Beginning Balance	**549,380**	**135,901**
Include only Budget Code = 8 MSD Items	**358,780**	**42,952**
Ending Balance	**190,600**	**92,949**

Figure 30: Impact of Business Rules on Backorder Requisitions / Units Reported

Impact of Business Rules on LRT:

The following business rules are applied to display the LRT data used in reporting. Also provided are the impacts of the applied business rules (impact figures from July 2002 LRT data).

If a requisition is missing either the customer receipt date or the serial date, the record is filtered (161,704 records without a customer receipt date filtered in July).

All stock numbers are cross-referenced by NIIN.

Transactions without a valid priority (1-15 are valid) are filtered (10,131 transactions filtered in July 2002 data).

Only transactions with Air Force Routing Identifier Codes (RICs) are included (481,938 transactions filtered in July 2002 data).

Any record that has a negative value for any segment or is missing more than one segment after the above scrub will be included in the LMARS table but will be excluded from all computations and reports (5,786 records filtered in July 2002 data).

The data is scrubbed for duplicate transactions based on the document number (for records without a suffix) and duplicates are removed (152 transactions filtered in July 2002 data).

Source of Supply (SOS) is assigned from D043 (SOS is used to identify the depot and to extract the requisitions from the Defense Automatic Addressing System (DAAS)). Any records that do not have a value in the Depot (SOS) field within the Access Database will be filtered (0 records filtered in July 2002 data).

Only closed requisitions which have all segments completed are included in LRT. Open requisitions are analyzed under the Backorder metric.

Only MSD (budget code 8) items are included in LRT reporting (as assigned in D043). Non-MSD items that meet other filter criteria will be contained in the LMARS table but will not be included in any computations or reports. (2,587 transactions filtered for reporting in July 2002 data)

	RULE	LRT Requisitions
	Beginning Balance	**571,004**
Exclusions	Transaction is missing either the customer receipt or serial date	**161,704**
	Transactions w/out a valid priority code (1-15)	**10,131**
	Transactions w/out valid AF Routing Identifier Codes (RICs)	**481,938**
	Any record that has a negative value for any segment or is missing more than one segment	**5,786**
	Exclude duplicate transactions based on Document Number and without a suffix code	**152**
	DEPOT field doesn't contain a valid two-character code (i.e. OO, OC, WR, etc.)	**0**
	Exclude any non-budget code = 8 MSD Items	**2,587**
	Ending Balance	**34,254****

**Transactions may have more than one of the following criteria for exclusion. Therefore, duplication may occur in the number of transactions excluded.

Figure 31: Impact of Business Rules on LRT

Appendix 4 – Spares Priority Release Sequence (SPRS)

The following is the Board of Advisors (BOA) backorder release sequence implemented within D035 on 1 Oct 2000. In effect, we no longer look at the priority of the requisition for an AF activity; we look at the category it is in. For other services and Foreign Military Sales (FMS) customers, we continue to sequence these according to Uniform Materiel Movement and Issue Priority System (UMMIPS); they maintain a "place holder." For AF requisitions we are allowed to shuffle around and place in the SPRS sequence.

SPRS CAT.	PRIORITY	EXPLANATION
1	01	Joint Chiefs of Staff (JCS) project coded MICAP requirement – Requisition contains an "N" or "999" in the Required Delivery Date (RDD) field and a "9-series" project code (i.e., 9FS).
2	01	Project code 720 MICAP requirement – Requisition contains an "N" or "999" in the Required Delivery Date (RDD) field and a "720" project code.
2	01	Project code 700 MICAP requirement - Requisition contains an "N" or "999" in the Required Delivery Date (RDD) field and a "700" project code.
2	01	OCONUS and CONUS MICAP requirement – Requisition contains an "N" or "999" in the Required Delivery Date (RDD) field.
3	01	Joint Chiefs of Staff (JCS) project coded requirement – Requisition contains a "9-series" project code (i.e., 9FS) (non-MICAP).
3	01	Project code 720 requirement – requisition contains a "720" project code (non-MICAP).
3	01	Project code 700 requirement - Requisition contains a "700" project code (non-MICAP).
3	01	Anticipated MICAPs from OCONUS and CONUS – Requisition contains an "E" in the Required Delivery Date (RDD) field. (NOTE: AF does not use.)
3	01	Awaiting Parts requirement – Requisition contains a "6L" or "6N" advice code.
3	01	Readiness Spares Package (RSP) requirement – Requisition contain a "122" or "123" project code.
3	01	All other requirements
4	02-15	Joint Chiefs of Staff (JCS) project coded MICAP requirement – Requisition contains an "N" or "999" in the Required Delivery Date (RDD) field and a "9-series" project code (i.e., 9FS).
5	02-15	Project code 720 requirement – Requisition contains an "N" or "999" in the Required Delivery Date (RDD) field and a "720" project code.
6	02-15	Project code 700 requirement – Requisition contains an "N" or "999" in the Required Delivery Date (RDD) field and a "700" project code.
7	02-15	Joint Chiefs of Staff (JCS) project coded requirement – Requisition contains a "9-series" project code (i.e., 9FS) (non-MICAP).
8	02-15	Project code 720 Readiness Spares Package (RSP) requirement – Requisition contains a "720" project code (non-MICAP).
9	02-15	Project code 700 Readiness Spares Package (RSP) requirement - Requisition contains a "700" project code (non-MICAP).
10	02-15	OCONUS and CONUS MICAP requirement – Requisition contains an "N" or "999" in the Required Delivery Date (RDD) field.
EXPRESS	02-15	Anticipated MICAPs from OCONUS and CONUS – Requisition contains an "E" in the Required Delivery Date (RDD) field. (NOTE: AF does not use.)
EXPRESS	02-15	Awaiting Parts requirement – Requisition contains a "6L" or "6N" advice code.
EXPRESS	02-15	Readiness Spares Package (RSP) requirement – Requisition contain a "122" or "123" project code.
EXPRESS	02-15	All other requirements

Tie Breakers within each category are as follows:

1. Priority
2. Required delivery/availability Date (RDD/RAD), if earlier than standard delivery date (SDD).

3. Date requisition is received by D035A.
4. Document number serial number.
5. Stock record account number/DOD Activity Address Code (SRAN/DODAAC) of the document number.

Appendix 5 – Future AFMC Supply Chain Metrics Guide development

Future iterations of this guide will be developed to expand on and illustrate more supply chain processes and those metrics that best correlate to them. This appendix outlines future development plans.

Defense Logistics Agency (DLA):
The correlation between DLA MICAP hours and AF MICAP hours is almost perfect – underscoring the need to incorporate specific analysis capabilities for this key supplier.

Financial Process:
The goal of this focus will be to provide managers the metrics and analysis they need to make decisions that will result in improved results for the warfighter. This will include POM support metrics and the linkage of financial decisions and their impact on warfighters and operational capability.

Enterprise Partner Supplier Linkage:
As the Air Force continues to integrate its Supply Chain with Enterprise Partners like Lockheed Martin and Boeing, it is important that Air Force leaders have access to the right metrics to gauge the health of these relationships and forecast constraints that will impact warfighters and capability.

Broader Budget Code Analysis:
The focus for reporting has historically been on budget code 8 items. However, as AFMC continues to refine supply chain metrics there may be a move to broaden this focus to include other budget codes.